

CONTENTS

List of Illustrations	ix
PART ONE - GOLD BASICS	
Chapter 1: Introduction	1-1
1.1 About MCACES GOLD	1-2
1.2 About This Manual	1-3
1.3 What's New in Gold 5.30.....	1-5
Chapter 2: Getting Started	2-1
2.1 System Requirements and Options	2-1
2.2 Installing on a Single PC	2-3
2.3 Configuring a Mouse	2-8
2.4 Installing on a LAN	2-9
Chapter 3: Finding Your Way	3-1
3.1 The Main Menu Screen	3-2
3.2 The Databases	3-3
3.3 Database Levels	3-6
3.4 Edit and Add Modes	3-9
3.5 Help, Prompts, and Notes	3-12
3.6 The Ten Action Keys	3-16
3.7 The Function Menus	3-18
3.8 The Database Menus	3-21
3.9 Using the Keyboard	3-23
3.10 Using a Mouse	3-26
PART TWO - THE PROJECT DATABASE	
Chapter 4: Project Database Overview	4-1
Chapter 5: Starting a New Project	5-1
5.1 Creating the Project Database	5-2
5.2 About Project Structure	5-6
5.3 Selecting the Estimate Type	5-8
5.4 Naming the Project Columns	5-12
5.5 Setting the Breakdown Structure	5-20

Chapter 6: Working With Project Direct Costs	6-1
6.1 Adding Titles	6-3
6.2 Adding Cost Items	6-9
6.3 Using Lookup From the Project	6-19
6.4 Editing and Deleting	6-23
6.5 Working With Crews	6-25
6.6 Working With Crews as Assemblies	6-29
6.7 Adjusting for Overtime	6-37
6.8 Working With Shipping Costs	6-39
6.9 Working With Assemblies	6-45
6.10 Using Modifiers in the Project	6-49
6.11 Working With Alternate Costs	6-53
Chapter 7: Working With Indirect and Owner Costs	7-1
7.1 Types of Indirect Costs	7-2
7.2 Contractor Tiering	7-3
7.3 Defining Contractors - Primary Entry Screen	7-5
7.4 Defining Contractors - Secondary Entry Screen	7-12
7.5 Applying Contractors to Costs	7-17
7.6 Working With Owner Costs	7-19
7.7 Working With Contingency Notes	7-23
Chapter 8: Working With Existing Projects	8-1
8.1 Selecting a Project Database	8-1
8.2 Working With Project Templates	8-3
8.3 Converting Projects From Earlier Versions	8-4

PART THREE - THE SUPPORTING DATABASES

Chapter 9: Working With the Supporting Databases	9-1
9.1 Adding Titles to a Database	9-2
9.2 Adding Detail Items	9-4
9.3 Editing and Deleting	9-6
9.4 Using the Database Edit Screens	9-7
9.5 Working With Multiple Databases	9-12
9.6 Printing From the Supporting Databases	9-13

Chapter 10: The Unit Price Database	10-1
10.1 Structure of the Database	10-2
10.2 UPB Titles	10-3
10.3 Adjusting Material Prices	10-4
10.4 UPB Detail Items	10-8
10.5 Working With Modifiers.....	10-14
Chapter 11: The Crews Database	11-1
11.1 How Crews Are Used	11-2
11.2 Structure of the Database	11-4
11.3 Crew Titles	11-6
11.4 Crew Members	11-9
Chapter 12: The Labor Rates Database	12-1
12.1 Structure of the Database	12-2
12.2 Labor Rate Titles	12-3
12.3 Labor Rate Detail Items	12-4
Chapter 13: The Equipment Rates Database	13-1
13.1 Structure of the Database	13-2
13.2 Equipment Titles	13-3
13.3 Equipment Detail Items	13-5
13.4 Equipment Rates Database Edit Screens	13-15
Chapter 14: The Assemblies Database	14-1
14.1 Structure of the Database	14-3
14.2 Assembly Titles	14-5
14.3 Assembly Detail Items	14-8
14.4 Detailless Assemblies	14-16

PART FOUR - USING THE FUNCTION MENUS

Chapter 15: The Add/Edit Menu	15-1
15.1 Edit Item - F4 Key	15-2
15.2 Edit /View Notes - F7 Key	15-2
15.3 Edit Owner - Alt+W Keys	15-4
15.4 Edit Other - Shift+ F7 Keys	15-4
15.5 Add Item - F2 Key	15-4
15.6 Add Subtitle - Shift+F3 Keys	15-5
15.7 Add Detail - Shift+F5 Keys	15-5
15.8 Select From List - F8 Key	15-5

15.9	Resize Browse - Ctrl+F5 Keys	15-6
15.10	Screen Restore - Alt+U Keys	15-6
15.11	Field Undo - Ctrl+U Keys	15-6
15.12	Field Restore - Alt+R Keys	15-6
Chapter 16:	The Lookup Menu	16-1
16.1	Using Lookup	16-3
16.2	Lookup Menu Options	16-6
Chapter 17:	The Go To Menu	17-1
17.1	List Titles - F3 Key	17-2
17.2	Browse Detail - F5 Key	17-2
17.3	Find Keyword - Alt+F7 Keys.....	17-3
17.4	2nd View - Ctrl+S Keys	17-4
17.5	Exit Screen - F10 Key	17-4
17.6	Exit Database - Shift+F10 Key	17-5
17.7	Top of Database - Alt+F10 Keys	17-5
17.8	Down a Level - Ctrl+F10 Keys	17-5
17.9	Previous Element - Ctrl+Page Up Keys	17-5
17.10	Next Element - Ctrl+Page Down Keys	17-6
Chapter 18:	The Mark Menu	18-1
18.1	Mark - Shift+F9 Keys	18-2
18.2	View Marks - Alt+F9 Keys	18-2
18.3	Cancel Marks - Ctrl+F9 Keys	18-2
18.4	Copy - Shift+F4 Keys	18-3
18.5	Move - Alt+F4 Keys	18-6
18.6	Delete - Ctrl+F4 Keys	18-7
18.7	Merge From - Alt+E Keys	18-7
18.8	Extract To - Alt+X Keys	18-9
18.9	Promote Title - Alt+T Keys	18-10
18.10	Demote Title - Alt+D Keys	18-10
Chapter 19:	The Compute Menu	19-1
19.1	Recalculate - Shift+F2 Keys	19-2
19.2	Reprice Material - Alt+F2 Keys.....	19-4
19.3	Reprice L & E - Ctrl+F2 Keys	19-5
19.4	Link Quantity - Ctrl+F7 Keys	19-6
19.5	Adjust Pricing - Alt+F3 Keys	19-7
19.6	Add Modifier - Alt+O Keys	19-10
19.7	Edit Modifier - Ctrl+O Keys	19-10

Chapter 20: The Tools Menu	20-1
20.1 Print Single Element - Ctrl+E Keys	20-3
20.2 Get From Table - Alt+B Keys	20-4
Chapter 21: The Help Menu	21-1
21.1 Help - F1 Key	21-2
21.2 Keys Help - Shift+F1 Keys	21-3
21.3 Edit Help - Ctrl+F1 Keys	21-3
21.4 Show Memory - Alt+S Keys.....	21-4

PART FIVE - USING THE DATABASE MENUS

Chapter 22: The Prepare Menu	22-1
22.1 Name Database Columns	22-3
22.2 Set Breakdown Structure	22-4
22.3 Reprice Labor and Equipment	22-5
22.4 Reprice Material	22-6
22.5 Copy Project Notes	22-7
Chapter 23: Reports	23-1
23.1 Reports Overview	23-2
23.2 The Reports Menu	23-5
23.3 Edit Detail Report Formatting	23-6
23.4 Edit Other Formatting	23-10
23.5 Edit Report Title Page	23-13
23.6 Select Reports to Print	23-15
23.7 Print Selected Reports To	23-19
23.8 Printing Database Listings	23-22
23.9 View Reports Using Viewer	23-26
23.10 List Material Backup / Vendor	23-28
23.11 Save / Load Report Settings	23-28
23.12 The Detail Report	23-30
23.13 Project Summary Reports	23-33
23.14 Contractor Summary Reports	23-38
23.15 Division Summary Reports	23-42
23.16 System Summary Reports	23-44
23.17 Shipping Summary Report	23-47
23.18 Backup Reports	23-48
23.19 Settings Reports	23-51

Chapter 24: Services	24-1
24.1 Choosing Multiple Databases	24-2
24.2 Select a Database	24-3
24.3 Copy a Database	24-5
24.4 Save To Compressed	24-6
24.5 Load From Compressed	24-10
24.6 Reset Database Index	24-12
24.7 Pack a Database	24-13
24.8 Erase a Database	24-14
Chapter 25: System Administration	25-1
25.1 Edit Permission Settings	25-3
25.2 Edit Bond and Profit Tables	25-7
25.3 Edit Printer Setup Table	25-9
Chapter 26: The DOS Menu	26-1
26.1 Create a DOS Shell	26-2
26.2 Run Communications	26-2
26.3 Quit GOLD	26-3
 APPENDICES	
Appendix A: Learning GOLD	A-1
Lesson 1: Starting the Project	A-2
Lesson 2: Modifying Project Characteristics	A-5
Lesson 3: Adding Titles	A-8
Lesson 4: Adding Cost Items Through Lookup	A-11
Lesson 5: Adding a User-Defined Cost Item	A-17
Lesson 6: Examining a Cost Item	A-20
Lesson 7: Applying Indirect Costs	A-25
Lesson 8: Applying Owner Costs	A-29
Lesson 9: Formatting Reports	A-32
Lesson 10: Printing Reports	A-36
Appendix B: Valid Units of Measure	B-1
Appendix C: Printer Strings / Report Examples	C-1
Appendix D: Error Messages	D-1
INDEX	Index-1

LIST OF FIGURES

PART ONE - GOLD BASICS

3.1 Main Menu Screen	3-2
3.2 GOLD Databases	3-5
3.3 Project Title List Screen	3-7
3.4 Project Detail Item List Screen	3-8
3.5 Project Detail Item Entry Screen	3-10
3.6 Help Screen	3-12
3.7 Note Window	3-15
3.8 The Add/Edit Menu	3-18
3.9 The Prepare Menu	3-21

PART TWO - THE PROJECT DATABASE

5.1 Project Database Edit Screen	5-2
5.2 Project Columns Screen	5-9
5.3 Set Breakdown Structure Screen	5-20
6.1 Title Entry Screen, Project Database	6-4
6.2 Cost Item Entry Screen, Project Database	6-9
6.3 Secondary Cost Item Entry Screen, Project Database	6-13
6.4 Secondary Title Entry Screen, Project Database	6-30
6.5 Link Quantity Window for Crew Member	6-35
6.6 Adjust Pricing Screen	6-42
6.7 Link Quantity Window for Assembly Item	6-47
6.8 Item Modifier Screen	6-50
7.1 Tiered Contractors on Title List Screen	7-4
7.2 Contractor Entry Screen	7-5
7.3 Secondary Contractor Entry Screen	7-12
7.4 Owner Cost Screen	7-20
7.5 Contingency Notes Window	7-23

PART THREE - THE SUPPORTING DATABASES

9.1 Title Entry Screen, Unit Price Database	9-2
9.2 Detail Item Entry Screen, Unit Price Database	9-4
9.3 Unit Price Database Edit Screen	9-7
10.1 Title Entry Screen, Unit Price Database	10-3
10.2 Detail Item Entry Screen, Unit Price Database	10-8
10.3 Secondary Detail Item Entry Screen, Unit Price Database	10-12
10.4 Modifier Entry Screen	10-14
11.1 Upper Level Title Entry Screen, Crews Database	11-6
11.2 Crew Title Entry Screen	11-7
11.3 Crew Member Entry Screen	11-9

12.1 Title Entry Screen, Labor Rates Database	12-3
12.2 Detail Item Entry Screen, Labor Rates Database	12-4
13.1 Title Entry Screen, Equipment Rates Database	13-3
13.2 Detail Item Entry Screen, Equipment Rates Database	13-6
13.3 Secondary Detail Item Entry Screen, Equipment Rates Database ...	13-10
13.4 Secondary Equipment Rates Database Edit Screen	13-14
14.1 Title Entry Screen, Assemblies Database	14-5
14.2 Detail Item Entry Screen, Assemblies Database	14-8
14.3 Secondary Detail Item Entry Screen, Assemblies Database	14-11

PART FOUR - USING THE FUNCTION MENUS

15.1 The Add/Edit Menu	15-1
16.1 The Lookup Menu	16-2
17.1 The Go To Menu	17-1
18.1 The Mark Menu	18-1
19.1 The Compute Menu	19-1
19.2 Adjust Pricing Screen	19-8
20.1 The Tools Menu	20-1
21.1 The Help Menu	21-1

PART FIVE - USING THE DATABASE MENUS

22.1 The Prepare Menu	22-1
23.1 The Reports Menu	23-5
23.2 Detail Report Formatting Screen	23-6
23.3 Other Report Formatting Screen	23-10
23.4 Report Title Page Screen	23-13
23.5 Report Selection Screen	23-15
23.6 Run Reports Window	23-19
23.7 Print Database Listing Screen	23-22
23.8 Sample Detail Report (Portion)	23-31
23.9 Sample Detail Report (Portion)	23-32
23.10 Project Owner Summary Report	23-33
23.11 Project Indirect Summary Report	23-34
23.12 Project Direct Summary Report	23-36
23.13 Contractor Indirect Summary Report (Portion)	23-38
23.14 Contractor Direct Summary Report (Portion).....	23-40
23.15 Division Direct Summary Report (Portion)	23-42
23.16 System Direct Summary Report (Portion)	23-45
23. 17 Detail Crew Backup Report (Portion)	23-48

24.1 The Services Menu	24-1
25.1 The Admin Menu	25-2
25.2 User Settings Screen	25-4
25.3 Bond and Profit Tables Screen	25-7
25.4 Edit Printer Setup Table Screen	25-10
26.1 The DOS Menu	26-1

APPENDICES

A.1 Project Database Edit Screen	A-4
A.2 Project Columns Screen	A-6
A.3 Set Breakdown Structure Screen	A-7
A.4 Title Entry Screen, LESSON Project	A-9
A.5 Completed Title List Screen, LESSON Project	A-10
A.6 Detail Item Entry Screen, LESSON Project	A-12
A.7 Level 1 Title List Screen, Unit Price Database	A-13
A.8 Detail-Level List Screen, Unit Price Database	A-13
A.9 Detail-Level List Screen, LESSON Project	A-16
A.10 Detail Item Entry Screen in Edit Mode, LESSON Project	A-21
A.11 Secondary Detail Item Entry Screen, LESSON Project	A-21
A.12 Detail-Level List Screen, Crews Database	A-22
A.13 Crew Entry Screen	A-24
A.14 Contractor Entry Screen, LESSON Project	A-26
A.15 Title List Screen With Contractor Record, LESSON Project	A-27
A.16 Title List Screen Showing Applied Contractor, LESSON Project	A-28
A.17 Owner Entry Screen, LESSON Project	A-30
A.18 Detail Report Formatting Screen	A-33
A.19 Other Report Formatting Screen	A-34
A.20 Report Title Page Screen	A-35
A.21 Report Selection Screen	A-37
A.22 Run Reports Window	A-38

CHAPTER 1

INTRODUCTION

Chapter Overview

Chapter 1 describes the features of MCACES GOLD and explains how this manual is organized. The following sections are included:

- 1.1 About MCACES GOLD
- 1.2 About This Manual
- 1.3 What's New in GOLD 5.30

1.1 About MCACES GOLD

Definition

MCACES GOLD is a versatile, easy-to-use software tool for estimating construction costs. GOLD runs on IBM compatible computers. It can be used by anyone responsible for budgeting or cost estimating of construction projects.

Multiple Databases

MCACES GOLD stores estimating data in multiple databases.

- The Project Database is the work area where you actually build estimates.
- The supporting databases all store cost information of different types and using different classification systems. These databases include Unit Price, Crews, Assemblies, Labor Rates, Equipment Rates, and Models.

Product Capabilities

MCACES GOLD provides a range of powerful features for maximum effectiveness and ease of use.

- Data entry in single item or full-screen browse format.
- On-screen estimate review, including totals, at all levels.
- Easy, detailed customizing of report formats, including detailed, summary, and resource utilization reports.

- Lookup capabilities that let you search for specific items in the supporting databases--by topic, key word, or number--and then copy them directly into the estimate.
- Automatic repricing of labor, equipment, and material costs from the supporting databases, under conditions that you designate.
- Functions for marking multiple items, and moving or copying them as a group.
- Flexible procedures for designating and accurately distributing contractor markups and Owner Costs.
- Easy cost adjustments at any estimate level.
- The ability to revise the supplied databases or to build new databases according to your needs.
- An optional Modeling component that allows you to store project histories, retrieve them, and then alter their parameters to build new projects.
- Automatic Metric/English unit of measure conversion.
- Shipping cost calculations.
- An optional Digitizer Module for computing quantities using a digitizer tablet.
- Versatile operation, using function keys and pull-down menus, with optional support for a mouse.
- Free-form notes that you can attach to any item or title in any database.
- Multi-leveled, context-sensitive Help available from all parts of the program.

1.2 About This Manual

Two Volumes

The MCACES GOLD user documentation consists of two volumes:

- The present manual, Volume 1, describes the main functions and capabilities, of the software.
- *Volume 2, Advanced Options*, describes advanced features and components.

Section 1.2 explains the best way to use Volume 1 as a learning and reference tool, and describes its overall structure and contents.

How to Use This Manual

The best way to use this manual depends on what information you need.

If you...	Then...
need to know how to install and start the program	see Chapter 2, "Getting Started."
need information about a specific task or part of the software	look for the topic in the Table of Contents or the Index
are a new user unfamiliar with former versions of GOLD	read Chapter 3, "Finding Your Way." Also, refer to the tutorial lessons provided in Appendix A.
are a System Administrator	read, in particular, Chapters 2 and 25.

Part One - GOLD Basics

Part One, which includes Chapters 1 - 3, introduces MCACES GOLD and provides basic information on its use.

- Chapter 2, "Getting Started," describes hardware and software requirements, installation procedures, and how to start the program. It also contains specific information about using GOLD on a Local Area Network (LAN).
- Chapter 3, "Finding Your Way," guides you through the various parts of the program, and explains how estimating data is organized and used by MCACES GOLD. General instructions on using the software are also found here.

Part Two - The Project Database

Part Two, Chapters 4 - 8, covers the Project Database and describes the overall process of building an estimate. This includes instructions for specific tasks such as setting up the project's structure, defining Direct, Indirect, and Owner Costs, and working with existing projects.

Part Three - The Supporting Databases

Part Three, Chapters 9 - 14, describes the supporting databases. These chapters include descriptions of the databases supplied with MCACES GOLD, and also instructions on adding, editing, and deleting information.

Note: The optional Models Database is described in Volume 2.

Part Four - Using The Function Menus

Part Four, consisting of Chapters 15 - 21, describes each of the function menus in turn, and explains when and how to use each available menu option. These menus are used to select the program functions you need while working in a database.

Part Five - Using The Database Menus

Part Five, which includes Chapters 22 - 26, explains the purpose and use of the database menus. These menus give access to system-wide features such as printing reports, managing databases, and maintaining administrative settings.

Note: The Utilities and MCACES Menus are described in Volume 2.

Appendices

Appendix A, "Learning GOLD," provides a step-by-step tutorial that guides you through all the procedures involved in building a sample estimate.

Appendix B, "Valid Units of Measure," lists the Metric and U.S. units of measure recognized by the software and the correct abbreviations to use for these units.

Appendix C, "Printer Strings and Report Examples," gives recommended printer setup strings for commonly used printers, and provides a series of example reports with the methodology used to produce them.

Appendix D, "Error Messages", lists MCACES GOLD error messages, explanations of the source of the error, and recommended methods of correction.

1.3 What's New in GOLD 5.30

Introduction

Gold 5.30 is a major upgrade version which includes many improvements and new features. This section introduces these improvements and features.

Memory Requirements

Conventional Memory

Before using version 5.30 of MCACES Gold, you should have a minimum of 530K (542,720 bytes) of conventional memory available.

Services

Conversion

When selecting a Project, Assembly or Models database for the first time with this version of the software, you will be asked "Convert PROJECT (or ASSEMBLY, etc.) database to Version 5.30 Format? (Y/N) N". **This conversion is not reversible!** Databases which have been converted to the 5.30 format can no longer be accessed using any earlier version of the software. **Make a backup copy of your database** before you convert it to 5.30 format. We recommend that you make a copy of all of your project databases and convert them in a new directory called GOLD530\PROJECT. Conversion of large databases can take an extended amount of time. There is no conversion to v5.30 involved when selecting a Unit Price database, Labor, Equipment or Crews database. Note: If you convert a Project database that has Second View titles, those titles will automatically be deleted and must be recreated in the new version.

Select a Database

When selecting a new Project database, using either F8 or Select a Database under the Services menu, you are now asked "Select PROJECT XXXXXX Related Databases? (Y/N) N" If you answer Y, then the software will automatically select the databases that were last used to reprice this project. If those databases are not located on your system, then the system will leave that path highlighted and no databases loaded. If you always use the same supporting databases for all of your projects, you should answer N to this question. If your databases become deselected by mistake, use the Select a Database under the Services menu to reselect the databases you need.

Pack a Database

When executing the Pack a Database function under the Services menu, you may now be asked "Do you wish to PACK the memo data also? (Y/N) N". You will be asked this if there is any memo data that can be packed. Answer yes, unless you have a very large database and don't want to take the time to pack the memo data right now. This new feature may help to reduce the size of your databases.

New Functions

Get From Table

This new function allows you to view ASCII text file tables from within the software. You can also copy data from the ASCII file back to any input field on a Gold screen. This makes it easy to input data that might otherwise have to be looked up in reference books and keyed in manually. Ten ASCII files (listed below) representing construction productivity factors are supplied with this release and are stored in the Gold530\Tables subdirectory. You can add ASCII data files to be used for viewing and capturing at any time. Any software that can write data in ASCII format (like DOS) can be used to create the files.

- Swell Voids and Load Factors
- Weight of Materials
- Bearing Powers
- Bucket Fill Factors
- Angle of Repose of Various Materials
- Coefficient of Traction Factors
- Typical Rolling Resistance Factors
- Speed Conversions
- Curve Superelevation
- Grade in Degrees and Percents

Detailless Assemblies

These are assemblies in a Gold Project or Models database that do not contain detail items. Instead, a single title record defines the assembly in the Project or Model database, with the detail quantities and costs referenced from a corresponding assembly in the Assemblies database. The main purpose is to save space in Model and Project databases.

Calculation Change

Adjusting for Overtime

Overtime applied in the project will now be calculated on the basic rate before fringe benefits, rather than on the Total Rate.

Using C for Compute on Contractor Bond

In 5.20J, when you used C for Compute, the bond was calculated on the Direct costs only. In this version the bond will calculate on the running total of the Direct costs and any other contractor markups to the left of the Bond. Also, new Bond Tables have been supplied with this version.

Display

On-Screen Indication of Overtime and Adjust Pricing

At the lowest title level, when Overtime has been applied, a ^ will appear to the left of the title on-screen. At any title where an adjustment has been made using the Adjust Pricing screen, a % will appear to the left of the title.

Second Line of Description in Browse Mode

When in the browse mode at the detail level, the highlighted item that appears in the top of the browse window now displays as much of the second description line as possible. This makes it possible to read the second description line as you browse through the database without hitting F7 to read the notes on each item.

Detail Edit Mode

When you are editing a detail item in any database, the cursor will now remain in the same field when using the Page Down key. This enables you to easily edit the same field in item after item.

Parameter Worksheets

New Layout

The parameter worksheets have a new more logical layout. Some of the field names have been rearranged and renamed.

Notes

Each parameter worksheet can now have a note attached. This note is attached to the parameter worksheet rather than the title itself. These notes do not print on reports.

New Operators

Three new Operators have been added to the Link Quantity and Parameter Worksheets. They are:

M - (R) Multiply by - This is like * Multiply by, except that the result is rounded to the nearest integer

B - (R) Divide by - This is like / Divide by, except that the result is rounded to the nearest integer

I - (R) Divide into - This is like \ Divide into, except the result is rounded to the nearest integer

Model Input

This new feature allows you to input data into all single value parameter worksheets on one input screen. What this means is that you can input many parameter changes and then save the changes one time, rather than inputting the changes on each separate worksheet which results in a recalculation for each worksheet. Model Input can be used on any worksheet that has a single line with an N on the Reference field and an = as the operator. Model Input is a selection under the Compute menu.

Item Selection

A parameter worksheet can now be used to select detail cost items. You can develop a worksheet that calls for a certain value. The detail item that most closely matches that value will be selected for the assembly or cost item list. When the value changes, the selected item may also change. For some examples of item selection worksheets, see the parameter worksheets 183I - 186I attached to the 9.15.20 fence assembly in the new assemblies database CWSA92.

Reports

Title Page

Sales Tax

The sales tax percentage is now printed on the report title page.

Effective Pricing Date

This is a user-input field that appears on the title page, as well as on the header of each page of the report.

Settings Reports

Owner Settings

The previous Owner Settings Report has become the Owner, Overtime, and Adjustments Settings Report. This report will list any Owner Cost Markups applied at the default Owner Cost level, as well as any Owner Cost markups that have been applied at the lowest title level. It will no longer print titles for which no adjustments have been made. In addition to the Owner Cost markups, the settings report will print any title on which Overtime has been applied, displaying the Overtime information that has been input on the OTHER screen at the lowest title level. (This includes days per week, hours per day, hours per shift, shifts per day, and the overtime percentage for labor.) Any titles for which adjustments have been made using the Adjust Pricing screen will also be printed, along with the requested adjustments as displayed on the Adjust Pricing screen.

Detail Report

Indicator of Overtime and/or Adjust Pricing

On the detail report, there is now an indicator when Overtime or Adjust Pricing has been used. If Overtime has been applied at a certain title, the word ****OVERTIME**** appears on the same line as the title. If an Adjust Pricing adjustment has been made, the word ****ADJUSTED**** also appears on the same line. If both types of adjustments have been made, the words appear as ****OVERTIME** **ADJUSTED****.

CSI Sort

In 5.20J, you could sort the details in CSI order by turning the UPB titles on. Now, it is possible to get a detail report sorted in CSI order by inputting the level under which all details will sort in CSI order. This function is selectable on the Shift F7 screen from the Edit Other Report Formatting screen. You input a number which represents the lowest project title level that will appear in the detail report. If the you input a 1, the detail report will list each level 1 title from the project and sort all the cost items in CSI order under that title. No other project title levels will appear in the detail report. This feature may be used in combination with printing the UPB titles.

Summary Reports

"Lookahead" Reporting

This feature automatically condenses the summary reports to a more logical, readable, and space-saving format.

TOTAL

The word TOTAL has been added to the total lines on detail and summary reports. This makes discerning the difference between the title and the total line easier.

Headings on Summary reports are now titled by the level name that has been input on the Project Breakdown screen under the Prepare Menu. Instead of saying "Project Owner Summary - Level 2" a report heading will now say "Project Owner Summary - Facility" (or whatever you have called level 2).

Backup Reports

Equipment Backup Report

On the Equipment Backup Report some of the headings have been rearranged and renamed to be consistent with the EP 1110-1-8 Equipment manual.

New Cost-to-Prime Labor Backup Report

See below for a description of this new backup report.

New Reports

Profit Weighted Guidelines Report

This is a new report that may be printed for each contractor that is using C for Compute on the Profit markup. The report displays each profit factor and shows what weighting each factor has received. Notes may be attached to each contractor's Profit Weighted Guidelines screen. These notes will be printed at the bottom of the Profit Weighted Guidelines report.

Cost-To-Prime Labor Backup Report

This new report is available at any level and will itemize the laborers under each title, separating Laborers, Foremen and Apprentices. Each laborer type is listed with the number of hours that labor ID is used under each title, along with the database rate, the extended amount of the number of hours times the database rate, the actual rate to the prime (including Overtime, Subcontractor Markups and any Adjust Pricing), and the extended amount of the hours times the actual rate.

HCAS Report

This new report is for use in conjunction with the Historical Cost Analysis System (HCAS), an interagency historical cost report system which will be used for Hazardous, Toxic, and Radioactive (HTRW) Remedial Action (RA) projects. The HCAS Report in MCACES Gold 5.30 displays the estimate costs as sorted by HCAS Category Codes and HTRW RA Work Breakdown Structure (WBS). The cost estimate breakdown must be set up using an entry screen accessed from the Tools Menu. The feature is intended to be used on the Government Estimate (G.E.) for Bid Opening. The summary G.E. costs breakdown can be automatically adjusted to award amounts. This is accomplished by the software using proration from the actual award amount / Government Estimate ratio when the user enters the total award amount on another new entry screen. Also, the calculated actual award amounts can be overridden by the user. This HCAS Report displays the award costs in a format required for the HCAS system.

New Reporting Capabilities:

Page Break in Project Notes

By inserting %% it is now possible to insert a page break in the Project Notes.

Additives/Alternates

You now have the capability to designate certain level one titles as Alternates or Additives. These titles will not be included in the total project cost when printing a Level One Project Summary report. They will be listed at the bottom of the report under the title of ALTERNATES. This function is selectable on the Shift F7 screen from the Edit Other Report Formatting screen.

Markups at Levels

In summary reports, the Indirect and Owner markups may now be shown at a particular level, rather than at the project level. This means that if the Markups at Levels is set to 1, and you select a level 2 report, the level two titles will be displayed and then the total of the level one title will be displayed followed by the markups for that one title. Each level one title will be followed by the markups for that title. This function is selectable on the Shift F7 screen from the Edit Other Report Formatting screen.

Markup Percentages

In summary reports, if the Show Project Totals field is set to Yes, the percentage that each markup is of the running total can be displayed at the end of the report (or at each title level if the Markups at Levels is on). This is now a toggle switch between displaying the unit cost of each markup, the percent of the running total or displaying nothing. This function is selectable on the Shift F7 screen from the Edit Other Report Formatting screen.

Printer String in Report File

When you print a report to a file, the print string (setup) for the selected printer is now the first line of data in that file. This means that you can print a report to a file, edit the file in DOS or other text editor and then send the file to the printer. If you do not have access to a printer at your computer, you can put the file on a diskette and then move it to another computer that does have access to a printer. You can then print the file using DOS. If you don't want a printer string in your report file, you can select "F-No Setup" as your Printer Setup when you print your report to a file.

ENG3086 Capabilities

The error "Subcontractors Not Defined" will no longer stop the export of a 3086 estimate. Now, the export file will be created, and an error message will be generated to inform you of the error condition.

Documentation

Replacement Pages

Replacement pages incorporating the new features and changes to the MCACES User's Manual are included with this shipment.

Report Examples

The documentation includes additional pages illustrating sample reports with the settings used to create them. See Appendix C included with the MCACES User's Manual replacement pages.

Printer Setup Strings

The documentation also includes a sheet of printer setup strings, including setup strings for the HP LaserJet 4 in portrait and landscape. This version of the software will not automatically load new printer setup strings. You may input a new printer setup string by accessing the Edit Printer Setup Table screen under the ADMIN menu. See Appendix C included with the MCACES User's Manual replacement pages.

Error Message Listing

A listing of many of the MCACES Gold generated error messages is now included in the documentation, so that you may reference the list when receiving an error message that you don't understand. See Appendix D included with the MCACES User's Manual replacement pages.

On-Line Help

Additional On-Line help has been added to various screens in the software. Information from Technical Manual (TM-5-800-2) "Cost Estimates For Military Construction" has been added in the following locations:

Location in MCACES Gold:	Help Topic:
Quantity field on a project detail cost item	Quantity Takeoff Guidelines
Main Menu on the UPB Database	Sources of Unit Cost Data
Description field on a UPB Cost Item	Development of Construction Tasks
Labor Cost field on a UPB Cost Item	Development of Unit Costs
Equipment Cost field on a UPB Cost Item	Development of Unit Costs
Material Cost field on a UPB Cost Item	Development of Unit Costs
Main Menu on the Crews Database	Estimating Methodology
Basic Rate field in the Labor database	Basic Wage Rates
Overtime fields in the Labor database	Overtime
Payroll Taxes/Insurance fields in the Labor database	Taxes and Insurance
Material cost field on a project detail cost item	Material Pricing
Profit Weighting Factors fields/Admin Menu	Profit
Bond Class field on OTHER contractor screen in the project database	How Surety Bonds are computed

Databases

New Sample Projects/Templates:

New Military Template (MILTM2)

This template is to be used when creating a 3086 Project from scratch. This new template includes the titles from the most current TRACES work breakdown structure. Using this template allows you to enter Owner Cost information, either at the standard Owner Cost Entry screen, or using the ENG3086 Design Information screen under the MCACES menu. Owner Cost information entered in the ENG3086 Design Information screen will only be used when you choose to print a 3086 Listing or use the Export to ENG3086 Format. The new MILTM2 template also allows you to change the Owner Cost level from one to any other level. To take advantage of the TRACES work breakdown structure, use Copy a Database on the Services Menu, rather than F2 Add on the MILTM2 template.

New HTRW Template (HTWTMP)

This template contains the titles from the recommended HTRW work breakdown structure. To take advantage of the HTRW work breakdown structure, use Copy a Database on the Services Menu, rather than F2 Add on the HTWTMP template.

New HTRW Project (HTWEXM)

This is a sample estimate prepared by the HTRW-MCX in Omaha, Nebraska. It will serve as a guideline for those preparing Remedial Action cost estimates, utilizing the HTRW Remedial Action work breakdown structure as required to categorize costs.

Unit Price Book:

The Unit Price Book now has a fifth column in which unit prices, subcontractor quotes or any other costs may be stored. These costs can then be transferred to projects, assemblies or models using the same column type (C). This column accrues subcontractor markups, like any other cost column.

The 1994 National Unit Price Book (NAT94A) is expected to be shipped in the Fall of 1994.

Equipment:

The new NAT93A equipment rates database reflects the cost items and rates from the 1993 version of the EP 1110-1-8 Construction Equipment Ownership and Operating Expense Schedule. Each region should refer to Appendix B in their manual for the area factors for their area. These factors must be input on the OTHER screen at the main database level. When your area factors are input and the database is recalculated, the equipment rates will be accurate for your region.

The following changes have been made to the equipment database:

- The age of equipment purchased new has been changed from 2 to 3 years.
- Sales Tax is applied to the value of a piece of equipment before the freight is added, rather than after.
- The Salvage Factor is no longer adjusted by the Economic Adjustment Factor (EAF).
- The calculation for FOG (Filters, Oil & Grease) now reflects the LAF (Labor Adjustment Factor).
- The System Administrator now has access to the WHPY (Working Hours Per Year) and the LAF (Labor Adjustment Factor).
- The notes field for each piece of equipment reflects the description from the EP 1110-1-8.

Get From Table

When adding a new piece of equipment referencing Appendix D, using Get From Table under the Tools Menu allows you to copy in the first three characters of the ID and also the Subcategory Key from a table of Appendix D items.

Labor:

NAT94A

This new labor rates database has 158 labor IDs, incorporating new IDs for Field Office Personnel, Diving and Tunneling. Maintenance and Repair laborers have also been added to support the new Life Cycle Cost (LCC) crews. The descriptions have been improved also.

Crews:

NAT94A

This new crews database reflects the new descriptions in the labor and equipment databases. Certain pieces of equipment have been substituted for others, in an effort to consolidate the equipment in the crews database. Crew titles have been improved. Some new crews have been added also.

Models:

Civil Work Breakdown Structure and Checklist (CIVWB3 and CIVWB5)

Two versions of the recommended title structure for Civil Works estimates are included with this shipment. (CIVWB3 goes down to 3 levels; CIVWB5 goes down to 5 levels and includes some details.) The Civil Work Checklist identifies all project products beginning with the reconnaissance phase and continues through project completion. It provides a standard product related format to identify all costs throughout the project life cycle necessary to accomplish the work required under each Civil Works feature. This database, which represents a Cost Engineer checklist, groups these CWBS products by feature and further expands the levels of detail necessary to assist in recognizing all the specific work items which may be required. These databases can not be used in MCACES Gold version 5.20J.

HTRW Work Breakdown Structure (HTWWB3 and HTWWB4)

The most recent version of the recommended title structure for HTRW estimates is included with this shipment. HTWWB3 goes to level 3 of the breakdown structure. HTWWB4 goes to 4 levels. This database can not be used in MCACES Gold version 5.20J.

TRACES Work Breakdown Structure (TRACES)

The most recent version of the recommended title structure for Military construction estimates is included with this shipment. This version includes notes on titles. This database can not be used in MCACES Gold version 5.20J.

Job Office Overhead Model (FIELD0)

This model includes different overhead item situations that can be used as a guide in estimating overhead costs for large projects. When using this model to pull in overhead costs, be sure to have a User-defined column with the description of OTHER in your project. This will ensure that the OTHER costs stored in the models will come into your project successfully.

Assemblies:

Updated and Converted 17 Building Assemblies Library (ASM94A)

This is a revised version of the previously released ASM92A assemblies database. It has been converted to 5.30 format. It includes more than 200 new paint assemblies under the 07.5 title. This database can not be used in MCACES Gold version 5.20J.

Civil Works/Smart Assemblies (CWSA92)

This new assemblies database includes 28 pre-built civil works assemblies. Each assembly includes parameter worksheets, requiring only that you input the parameters appropriate for your specific job. See new features under Parameter Worksheets for more information. This database can not be used in MCACES Gold version 5.20J. The types of assemblies included in this database are:

- 2. Earthwork
 - 10. Borrow To Fill By:
 - 10. Scraper w/ Push Dozer
 - 20. Scrapers Self Filling--Elevating
 - 30. Frontend Loader Crawler
 - 50. Bulldozer
 - 20. Trenching & Hole Digging By:
 - 10. Front End Loaders

- 20. Backhoes
- 30. Power Shovels
- 40. Dragline
- 50. Frontend Loader & Backhoes
- 30. Hauloff Loaded by:
 - 10. Front End Loaders
 - 20. Backhoes
 - 30. Power Shovels
 - 40. Dragline
 - 50. Gradall
 - 95. Dragline Special
- 40. Compaction
 - 10. Sheepsfoot Roller
 - 20. Vibratory Roller
 - 30. Pneumatic-Tired Rollers
 - 40. Smooth-Wheel Rollers
- 50. Dewatering
 - 10. Install Dewatering (Sq. or Rect)
 - 15. Install Dewatering (Circular)
 - 20. Dewater Operation Expense Per/Mo
 - 30. Remove Dewatering Equipment

9. Site Improvements

- 15. Fence Systems, Chain Link
 - 20. Fence Galv, Posts Set in Rock
 - 21. Fence, Vinyl Ctd. Set in Rock
 - 23. Fence Galv, Posts Set in Earth
 - 25. Fence, Vinyl Ctd. Set in Earth

HTRW Assemblies Database (HTWASL)

The HTRW Remedial Action Assembly Database is a collection of 30 cost assemblies structured to fit the first three levels of the standard HTRW Remedial Action Work Breakdown Structure (WBS). The assemblies in this database are examples of commonly used remediation technologies. This database can not be used in MCACES Gold version 5.20J. The categories and technologies included are:

33 HTRW Remedial Action

- 06 Groundwater Collection & Control
 - 01 Extraction & Injection Wells
 - 03 Slurry Walls

- 08 Solids Collection & Containment
 - 05 Capping Contaminated Areas/Waste Piles

10 Drums/Tanks/Structures/Miscellaneous Demolition
01 Drum Removal
02 Tank Removal

HTWEXM and HTWTMP

These two assemblies databases are titles only databases used to supply a title structure when printing a bid report, using the Systems Report under the Select Reports to Print menu. These databases can not be used in MCACES Gold version 5.20J.

CHAPTER 2

GETTING STARTED

Chapter Overview

This chapter lists GOLD's system requirements and explains how to install and start the software on a stand-alone computer and on a Local Area Network (LAN). Instructions for setting up a mouse are also provided.

2.1 System Requirements and Options

Computer

GOLD runs on IBM-compatible personal computers. The program requires a minimum of 530 Kb (542,720 bytes) of memory available for program use.

Disk Space Requirements

The MCACES GOLD software and related system files require approximately 8,500,000 bytes of hard disk space.

The supporting databases supplied with MCACES GOLD use varying amounts of additional disk space. Approximate disk space requirements are as follows:

- NAT94A, 1994 National Crews Database - 935 Kb (957,400 bytes)
- NAT94A, 1994 National Labor Rates Database - 47 Kb (48,100 bytes)
- NAT93A, 1993 Equipment Rates Database - 2,552 Kb (2,613,200 bytes)
- NAT92A, 1992 National Unit Price Book Database - 12,327 Kb (12,622,900 bytes)
- Assemblies Databases:
 - ASM94A, Revised 17-Building Assemblies Library - 7,593 Kb (7,775,200 bytes)
 - CSWA92, 1992 Civil Works Smart Assemblies - 559 Kb (572,400 bytes)
 - HTWASL, HTRW Assemblies Library - 977 Kb (1,000,400 bytes)
 - HTWEXM, HTRW Assemblies Estimate Example - Bid Form - 20 Kb (20,500 bytes)
 - HTWTMP, HTRW Template - Bid Form - 19Kb (19,500 bytes)

- Models Databases:
 - HTWWB3, HTRW Remedial Action Work Breakdown Structure, 3 Level - 92 Kb (94,200 bytes).
 - HTWWB4, HTRW Remedial Action Work Breakdown Structure, 4 Level - 985 Kb (1,008,600 bytes).
 - TRACES, TRACES Work Breakdown Structure - 435 Kb (445,400 bytes).
 - CIVWB3, 1994 Civil Works Work Breakdown Structure, 3 level - 397Kb (406,500 bytes).
 - CIVWB5, 1994 Civil Works Checklist, 5 level - 2,046Kb (2,095,100 bytes).
 - FIELDO, Job Office Overhead (JOOH) Models - 200 Kb (204,800 bytes).
- Projects Databases:
 - HTWEXM, HTRW Example Estimate - 146 Kb (149,500 bytes).
 - MILEXM, Storage Building - 141 Kb (144,400 bytes).
 - HTWTMP, HTRW Template - 101 Kb (103,400 bytes)
 - MILTM2, New Military Template - 393 Kb (402,400 bytes).
 - CIVEXM, Buffalo Bayou - 266 Kb (272,400 bytes).
 - CIVTMP, Civil Works Template - 16 Kb (16,400 bytes).
 - DEMAIR, Air Terminal Reconstruction - 477 Kb (488,400 bytes).

Mouse

GOLD is designed to be used with or without a mouse.

Operating System

GOLD runs in conjunction with DOS, Version 3.3 or higher.

Expanded or Extended Memory

GOLD can run under DOS and LAN software in 530 Kb (542,720 bytes) of available conventional memory. However, significant performance improvements are achieved if your computer has expanded or extended memory available for program use. This extra memory is used to store and quickly access frequently-used portions of the program. In general, extended memory will provide better performance than expanded memory.

- The expanded memory manager must be compatible with EMS 3.2 or higher.
- The extended memory manager must be compatible with XMS 2.0 or higher.

GOLD attempts to use up to 768 Kb (786,432 bytes) of each type of memory. No special setup is required.

Use On Local Area Networks (LANs)

A major advantage of GOLD is its multi-user capability on LANs. This allows more than one estimator to work on the same project files.

GOLD is designed as multi-user software that can also be used on stand-alone computers. The software is NETBIOS-compliant, which guarantees its compatibility with NETBIOS-compatible LAN environments.

Refer to Section 2.4 for information on using GOLD on a LAN.

2.2 Installing on a Single PC

Introduction

This section explains how to install GOLD on the hard disk of a single computer. The proper way to start and end the program is also explained.

Note: Read this section in conjunction with Section 2.4 if you are installing the program in a LAN environment.

Files Are Compressed

The files on the GOLD diskettes are compressed using the PKZIP (R) utility program. The files cannot simply be copied to hard disk. They must be expanded, using the installation procedure described below.

Editing the CONFIG.SYS File

For GOLD to run properly, your CONFIG.SYS file must contain the following command:

FILES = 45

Note: 45 is the minimum. Higher numbers are also acceptable.

If you are not using disk caching software, BSD also recommends that you have a BUFFERS= statement in the CONFIG.SYS file and set the number to 15 or higher (eg. BUFFERS=15).

Add these commands to your CONFIG.SYS file, if necessary, before you install GOLD. Refer to your DOS documentation for instructions on editing the CONFIG.SYS file.

GOLD Directories

GOLD program and database files should be always be stored in directories other than the root directory on your hard disk. The following procedure recommends creating a subdirectory called GOLD530 under the root directory, and then starting the Installation process from that subdirectory. The Installation process itself automatically creates the following subdirectories under the GOLD530 directory:

- DATA, which is used for storing your supporting databases.
- PROJECT, which is recommended for storing your Project Databases
- SYSDATA, which stores various files used by the GOLD software.
- TABLES, which stores ASCII text files available for use by the Get From Table function.
- EQTABLES, which stores Appendix D ASCII files used in adding new equipment items.

Note on Installing a Mouse

If you are going to use GOLD with a Mouse, you must first install the hardware and mouse driver software. Also, the command for starting the program is different. Refer to Section 2.3 for details.

Note on Prior Version Files

If you have GOLD program files prior to version 5.30 installed on your hard disk, you can keep them, provided you have sufficient disk space. If you install the new program files in the GOLD directory, any program files already stored in that directory *will be overwritten*. Therefore, if you want to keep your old version of GOLD on your hard disk, be sure to install the new version in a different directory.

Caution on Database Conversions

GOLD 5.30 uses a modified file format for the following kinds of databases:

- Project
- Models
- Assemblies

If you have databases of any of these types that were used with GOLD version 5.20J, GOLD 5.30 will convert them the first time you load the database. However, once this is done there is no way to convert a database back to its prior format. Therefore, you should make backup copies of any databases you want to save in their previous formats *before* loading them in GOLD 5.30.

Procedure 1: Installing the GOLD Software

Begin this procedure with the DOS prompt at the root directory or hard drive default directory.

Note: This procedure uses only the MCACES GOLD program diskettes. The diskettes for the sample projects and supporting databases are installed in the second procedure, which follows.

1. To create the GOLD530 directory:

Type MD\GOLD530 and press Enter.

2. To change to the GOLD530 directory:

Type CD\GOLD530 and press Enter.

3. Insert the GOLD Program 1 diskette in Drive A or any valid floppy drive. Then type:

A:INSTALL (where A is the drive designation), and press Enter.

Result: A series of messages is displayed as the GOLD directories are created and the program files are expanded and installed. When all the files on the first diskette have been installed, you are prompted to insert the next diskette.

4. Insert the Program 2 diskette in the floppy drive and press Enter.

Result: Messages are displayed as the program files are expanded and installed. You are then prompted for the next diskette.

5. Repeat Step 4 for the third Program diskette.

Result: When the last program files have been installed, the system displays a text file version of this document (README.TXT).

A bar at the bottom of the screen shows what keys you can use to move through the file.

6. After you have examined the file, press the Esc key.

Result: You are returned to DOS prompt at the GOLD530 directory.

Note: You can also review the text file at a later time by using the View Reports Using Viewer option on the Reports Menu.

Procedure 2: Installing the Databases

Once you have installed the program files in the above procedure, you can install the supporting databases and sample Project Databases. These databases are provided on one diskette.

Installation of these databases is optional. To save disk space, install only those you will use. You install the databases by using the Load From Compressed option from within the GOLD program. You can do this immediately after installing the program, or at a later time.

1. Start GOLD from the DOS prompt by typing COMPOSER and pressing Enter.

Result: GOLD is loaded into memory and a license screen is displayed. After a few moments, the GOLD Main Menu Screen is displayed.

Note: You can display the Main Menu Screen immediately by pressing Enter as soon as the license screen is displayed.

2. Press the S key to display the Services Menu. Then press the F key to select the Load From Compressed option.

Result: A window is displayed prompting you to enter the path where the compressed databases are stored. The default is the root directory of floppy drive A.

3. To install the databases, place the first diskette in your floppy drive. If you are using drive A, press Enter to accept the default. If you are using a different drive, first enter the drive designation, then press Enter.

Result: A window is displayed with a list of all the databases available to be copied.

4. Press the Space Bar to place a check mark next to the databases you want to install. (Use the Up and Down Arrow keys to move the highlight through the list of databases.)

Note: To help you calculate disk space, the disk space requirements of each database is shown in the window.

5. When all of the databases you want to install are checked in the window, press the Enter key.
Result: The program displays another window prompting you to select the path for copying. The GOLD530\DATA directory is shown as the default.
6. Press Enter to accept the default. (Or, if desired, you can type a different path and then press Enter.)
Result: The files are expanded and copied to the specified drive and directory. You are then prompted for the next database diskette.
7. Insert the second database diskette and press Enter.
Result: The files are expanded and copied. When the last files have been copied, the Main Menu Screen is redisplayed.
8. Repeat the procedure from Step 3 for whatever other database diskettes you want to install.

Starting the Program

Once GOLD is installed, you start the program from the DOS prompt in the GOLD530 directory, as in Step 5 above. Simply type COMPOSER and press the Enter key.

Exiting the Program

To exit GOLD, do the following from the Main Menu Screen.

1. Press the F10 key.
Result: The DOS Menu is displayed with the Quit option highlighted.
2. Press Enter.
Result: The program exits and you are returned to the DOS prompt.

Note: It is important that you exit in this way so that GOLD can save program settings for the next time you use the program. These settings are saved in a file called COMPOSER.INI. Refer to Section 2.4 for more information on this file.

2.3 Configuring a Mouse

Mouse Support

For maximum ease-of-use, GOLD supports the optional use of a Microsoft-compatible mouse.

The mouse hardware and mouse-driver software must be installed on your computer before GOLD is started. Refer to the documentation provided with your mouse for instructions.

Starting GOLD

If you use a mouse, the command for starting GOLD is different.

Instead of typing COMPOSER from the DOS prompt, type GOLDM and press the Enter key.

Batch File

The GOLDM command executes a DOS batch file distributed with GOLD. This file starts two extra program modules that GOLD uses to interact with the mouse. The text of the GOLDM.BAT file is shown below.

```
CG_MMENU CG_MOUSE.MNU  
COMPOSER  
CG_MMENU OFF
```

Reassigning the Mouse Buttons

The left and right mouse buttons have specific uses with the GOLD software. Generally the left button is considered the primary button and is used to select program choices, while the right button is considered the secondary button and is used to access the menu bar. You can, if you choose, reverse these functions.

To reassign the mouse buttons so that the right button is primary, start GOLD by typing GOLDR instead of GOLDM. This executes an alternate batch file, the text of which is shown below.

```
CG_MMENU CG_MOUSR.MNU  
COMPOSER  
CG_MMENU OFF
```

Using the Mouse

Refer to Section 3.10 for instructions on using a mouse with GOLD.

2.4 Installing on a LAN

Introduction

This section describes the use of GOLD on a network. It explains the role of the System Administrator, and the options and procedures for installing and running the program in a multi-user LAN environment.

Simultaneous Access

On a LAN, GOLD allows multiple users simultaneous access to all databases. This is possible because the software provides record-locking at the level of individual database items, and automatically checks to prevent one user from unknowingly overwriting simultaneous changes made by other users.

Also, GOLD provides write-protect locking of entire databases while reports are being generated.

Installation on the Network Server

In a LAN environment, you normally install the GOLD program files and supporting databases on the network server. Each user must be provided with a separate startup directory on the server. See below.

Optional Installation on Local Disks

You may also choose to install the GOLD program files on local hard disks. This option reduces network traffic. It also improves performance if users do not have either extended or expanded memory, since GOLD accesses the disk more frequently when only conventional memory is available.

System Administrator

One person, the System Administrator, should be responsible for installing the software and maintaining user access on the network.

Permission Settings

GOLD stores permission settings for each user. These settings define whether the user can access different databases and different levels of an estimate, and whether they can make changes to report formats.

These settings are established and maintained by the System Administrator through the Admin Menu. See Chapter 25 for instructions.

Do Not Set Files or Directories to Read Only

If you install GOLD program or database files on a network server, do *not* designate these files or their directories as read only. GOLD cannot access and use any files or directories that are tagged read only.

If you want to restrict users from changing GOLD databases, you can use the Edit Permission Settings option on the Admin Menu. See Section 25.1.

Note on the Map Root Command

Building Systems Design has encountered problems when using the MAP ROOT command with MCACES GOLD under Novell Netware Version 3.11. Novell personnel have confirmed to BSD that the MAP ROOT can indeed act unpredictably when changing directories. Therefore, BSD recommends that you avoid using this command when using GOLD on a Novell network. Though the MAP ROOT problem may not cause any loss of data, it can be very annoying.

COMPOSER.INI File

GOLD uses a file called the COMPOSER.INI file to store the permission settings for each user. This file also stores information about which databases were selected during a user's last session.

Note: If GOLD does not find a COMPOSER.INI file in the directory from which it is started, no permissions are given for that session.

Startup Directory

Each user on the LAN must be provided with a separate *startup directory*. This is the directory from which they start GOLD. This directory is used by the program to store their COMPOSER.INI file and related user-specific temporary files.

The System Administrator can also use this directory to store a DOS batch file to allow the user to start the program with a single command. This section provides a recommended procedure for setting up users' batch files.

Task List

The following is a list of the tasks recommended for setting up GOLD in a multi-user LAN environment. The tasks are described in the paragraphs that follow.

1. Install the software on the network server.
2. Create a directory for the System Administrator's use, and move the Administrative Module there.
3. Create a batch file to start the program from the Administrator's directory.
4. Create a directory for each user.

5. Edit the permission settings for each user and save them to the user's directory.
6. Copy the startup batch file to each user's directory.

Task 1: Install on the Network Server

Installing the GOLD program and databases on a network server requires the same steps as installing on a single computer.

Refer to the Installation Procedure in Section 2.2. Begin at the DOS prompt for the network drive.

Task 2: Create the Administrator's Directory

After completing Task 1, exit GOLD and return to the root directory on the network drive. Then do the following:

1. Type MD\ADMIN and press Enter.

Result: A startup directory for the administrator is created.

2. Type CD\ADMIN and press Enter.
3. Type COPY \GOLD530\CG_ADMIN.EXE and press Enter.

Result: The Administrative Module, which gives access to the Admin Menu, is copied.

4. You should now delete the Administrative Module from the GOLD directory, thus preventing other users from accessing the Admin Menu functions.

Type DEL \GOLD530\CG_ADMIN.EXE and press Enter.

Task 3: Create the Startup Batch File

While still in the ADMIN directory, create a DOS batch file so you can start GOLD with a single command.

You can create a batch file with an editor or word processing program, or you can use the DOS COPY command to copy from the console.

The following example assumes you are using the COPY command and that you have installed GOLD on network drive N. It also assumes you want to load the Mouse Menu software, as described in the previous section. You can alter the example batch file to suit your situation.

1. Type COPY CON:GOLDM.BAT and press Enter.

2. Type the following:

N:\GOLD530\CG_MMENU.COM

N:\GOLD530\CG_MOUSE.MNU

N:\GOLD530\COMPOSER

Next, hold down the Ctrl key and press Z, then press Enter.

Result: The system displays the message, "1 File(s) copied." The batch file is now complete.

Task 4: Create Users' Directories

For each user on the network, you now create a separate directory to serve as their GOLD startup directory.

Use the DOS MD Command to create each directory. Choose whatever names are most convenient for the directories.

Task 5: Edit Users' Permission Settings

This task edits the permission settings for each user and stores them in a COMPOSER.INI file in the user's directory.

1. From the DOS prompt, execute your new batch file to start GOLD. Type GOLDM and press Enter.

Result: GOLD is started and the Main Menu Screen is displayed.

2. Access the Admin Menu by pressing the A key. Then press Enter to choose the Edit Permission Settings option.

Result: A window is displayed, and you are prompted to enter the drive and directory from which the user's settings (stored in a COMPOSER.INI file) are to be loaded. Your current (ADMIN) directory is shown as the default.

3. Press Enter to load the settings from the current directory.

Result: The settings are loaded, and the Settings Screen is displayed.

4. Change the screen as necessary to reflect the user's permissions. Refer to Section 25.1 for details on using this screen.

5. After completing the screen, press the F10 key to exit.

Result: A window is displayed prompting you to enter the directory where the COMPOSER.INI file containing these settings is to be stored.

6. Type in the path specification for the user's startup directory, then press Enter.

Result: The file is stored in the specified directory. The program displays another prompt, asking if you want to store the settings in another directory.

7. Do you want to store the same permission settings in another user's startup directory?

- If no, press Enter to return to the Main Menu Screen. Then go on to Step 8.
- If yes, type Y.

Result: You are prompted for the next drive and directory where the settings should be stored.

Fill in the path specification and press Enter.

Repeat Step 7 for each user whom you want to receive the same settings.

8. If you need to store different settings for one or more users, repeat this procedure from Step 2.

When you are finished, you will have stored a COMPOSER.INI file in each user's startup directory.

9. To exit GOLD, press the F10 key and then the Enter key.

Result: The DOS prompt is displayed.

Task 6: Copy the Startup Batch File for Each User

Finally, use the DOS Copy command to copy GOLDM.BAT from the ADMIN Directory to each user's startup directory.

Result: All users can now start GOLD by typing GOLDM from their startup directory. The program will use the COMPOSER.INI file that you have stored in the startup directory for each user.

CHAPTER 3

FINDING YOUR WAY

Chapter Overview

This chapter introduces the screens, databases, and other components that make up GOLD. Some basic concepts you need to understand in order to use the program are also introduced.

The best way to use this chapter is while actually running GOLD on your computer. That way, you can follow the directions presented here and step through the different parts of the program.

3.1 The Main Menu Screen

Diagram

The Main Menu Screen (Figure 3.1) is the first screen displayed when the program is started.

Figure 3.1: Main Menu Screen

Parts of the Screen

As illustrated here, the Main Menu Screen consists of the following parts.

- The *database window*, on the lower right of the screen, shows a listing of the seven kinds of databases you can work with in GOLD. The Directory column displays the drive and directory name of the specific databases chosen for the current session. Each of these specific databases is identified in the ID column by a unique six-character database ID. The Name column provides a further description of each database. If no database of a particular type is selected, the message "(Not Located)" is displayed in the Name column.
- The *action key window*, on the left, lists ten basic functions you can use to interact with GOLD and the number of the function key associated with each.
- The *menu bar*, at the top of the screen, provides access to a series of menus that allow you to perform additional system functions. Different menus are displayed, depending on whether you are working within an open database or from the Main Menu Screen.

- The *message line*, located immediately below the database window, is used to display program prompts and error messages.
- The *status line*, at the bottom on the screen, displays indicator lights showing the status of various hardware and software switches that you can set. For example, "CAPS" is displayed on the status line when you have turned on the Caps Lock option on your keyboard.

3.2 The Databases

In its full version, GOLD allows you to use seven databases for storing data and building an estimate. These databases are accessed from the database window on the Main Menu Screen.

Project Database

The *Project Database* is the work area where you actually develop estimates.

The other databases are all used to store data items that you can incorporate into an estimate by copying them to the Project Database. These are referred to as *supporting databases*.

Models Database

The *Models Database* provides a library of previous projects that can be easily used to create new projects. The previous projects can be linked in such a way that you need make only minimal adjustments to quantities.

Note: The Models Database is described in *Volume 2, Advanced Options*.

Assemblies Database

The *Assemblies Database* is used to group cost items into sets or assemblies, which represent all the costs required to create a larger piece of a project.

For example, an assembly representing a specific type of concrete slab might include cost items for the compacted gravel fill, vapor barrier, wire mesh, concrete, edge form, and finish.

By using assemblies, you can reduce the amount of data you have to enter for each new project.

Assemblies serve as one form of input into the Project Database, and can also be used to construct Models for the Models Database.

Unit Price Database

The *Unit Price Database* contains individual cost items, each with its own material, labor and equipment costs, crew ID reference, and crew output figures. Shipping weight and shipping volume are also stored for items, where appropriate.

The Unit Price Database supplied with GOLD organizes cost items under a hierarchy of titles that corresponds to the Construction Specifications Institute (CSI) classification system. Alternately, you can supply your own database and classification scheme.

The Unit Price Database is also referred to as the UPB, reflecting its original source, the Army Corps of Engineers' Unit Price Book.

Cost items from the Unit Price Database can be copied into the Project, Models, or Assemblies Databases.

Crews Database

The *Crews Database* groups together labor and equipment costs into crews. You can use the Crews Database supplied with GOLD, or create your own database.

Crews stored in this database can be referenced by cost items in the Project, Models, Assemblies, or Unit Price Databases. Crews can also be copied directly into the Project Database for such tasks as mass excavation on civil works projects.

Labor Rates Database

The *Labor Rates Database* stores hourly costs for different trades. These costs include taxes, insurance, overtime, fringe benefits, and travel. Differentials for foreman costs and apprentice costs are provided.

The Labor Rates Database provides labor cost information to the Crews Database. Labor rate items (that is, tradesmen) can also be copied directly into the Project, Models, or Assemblies Databases as individual cost items.

Equipment Rates Database

The *Equipment Rates Database* stores unit equipment costs for the most common types of equipment found on many projects.

Its use by the program is similar to that of the Labor Rates Database. Cost data can be referenced by the Crews Database, and cost items can also be copied directly into the Project, Models, and Assemblies Databases.

Diagram

Figure 3.2 illustrates how GOLD uses its various databases for copying data (Lookup) and referencing cost information (Reprice).



Figure 3.2: GOLD Databases

3.3 Database Levels

Structure of the Databases

Each database within GOLD consists of a level of detail items set beneath one or more levels of titles. *Titles* are simply categories for classifying items in a database. Up to six levels of titles can be used.

Example: The DEMAIR Project Database

To see an example, look at the DEMAIR Project Database supplied with GOLD. This sample database represents a complete estimate for a remodeling project for an international airport. Follow the steps below, beginning on the Main Menu Screen.

Note: If the DEMAIR Project Database is not currently displayed in your database window, refer to Section 8.1 for instructions on selecting a database.

1. If the highlight is not already on the DEMAIR ID, use the Arrow keys to move it there. Then press Enter.

Result: The program loads the database and the highest-level title screen is displayed. (The highest level is also referred to as Level 1.) This screen is shown in Figure 3.3.

2. Examine the screen. Notice the list of titles belonging to the first level. Use the Arrow keys or mouse to move the cursor to the first title, Building Construction. Now press the Enter key

Result: A second-level title screen is displayed. These titles represent categories grouped within the larger category of Building Construction. Notice also the area at the top of the screen, where the higher level title is displayed. This area always shows the levels of titles above the current selection.

3. Use the Down Arrow key to move the highlight down to the title Electrical and select it by pressing Enter.

Result: A third-level title screen is displayed.

Figure 3.3: Project Title List Screen

4. Continue to highlight and select titles in the following sequence: "Lighting And Power," "Lighting," "Lighting Fixtures Installed."

Result: You have now moved through the third-, fourth-, and fifth-level title screens and displayed a detail-level list screen (Figure 3.4). This screen lists individual cost items under the "Lighting Fixtures Installed" category.

5. Examine the screen. A detail-level list screen is also called a *browse mode screen*, because it allows you to scan through the listed items.
 - Use the Tab key to move across the screen from left to right.
 - Use the Home key to move all the way back to the left side of the screen.

Figure 3.4: Project Detail Item List Screen

Summary

A GOLD database consists of a detail level and up to six title levels. You have now examined title- and detail-level list screens in a sample Project Database, which happens to contain five title levels.

Note: Leave the browse mode screen displayed as you go on to the next section.

3.4 Edit and Add Modes

Purpose

GOLD gives you the ability both to edit items in a database and to add new items. You can edit and add at all title levels and at the detail level.

Example Edit Mode Screens

To look at examples of the entry screens used in edit mode, do the following:

1. From the browse mode screen that you left displayed at the end of Section 3.3, press the F4 key.

Result: An entry screen is displayed (Figure 3.5). The fields contain data about the detail item that was highlighted when you pressed F4.

2. Use the Tab key to move from field to field on the screen.

Note: If you actually wanted to edit this detail item, you would type new data into the fields and press the Enter key to move from field to field.

3. Now hold down the Shift key and press the F7 key.

Result: A secondary entry screen is displayed. This screen is used to edit additional data about the item.

4. To exit edit mode without changing any data, press the Esc (Escape) key.

Result: The browse mode screen is redisplayed.

Note: If you had made changes and wanted to save them, you would have exited by pressing the F10 key.

Figure 3.5: Project Detail Item Entry Screen

Example Add Mode Screens

To look at an example of add mode screens, use the following procedure:

1. From the browse mode screen, press the F2 key.

Result: The primary entry screen for the selected detail item is displayed.

2. Examine the screen. Notice that it contains the same fields and data as the primary edit screen. The only differences in the display are that:
 - 2 ADD is now highlighted in the action key window instead of 4 EDIT.
 - The data is shown in brown (or low-intensity on monochrome monitors). This indicates that the item represents a default copy of the item that was highlighted when you pressed F2.

Note: The *functional* difference is that completing this screen will add a new item to the database instead of changing the current item.

3. Press the Shift+F7 key combination. As in edit mode, this displays the secondary entry screen. After looking at the screen, press Esc.

Result: The browse mode screen is redisplayed.

Note: If you had created a new item and wanted to save it, you would have exited by pressing the F10 key. The added item would then have been displayed on the browse mode screen.

Modes and Screen Types

The examples in this and the previous section introduce both the modes and the screen types that GOLD uses when you work within databases.

The *modes* represent different ways you can work with items in a database. The three modes are:

- *Browse mode*, in which you can scan a number of detail items beneath a title (and also edit some information contained in the items).
- *Edit mode*, in which you can change most information about a specific title or detail item, and see its total costs.
- *Add mode*, in which you add titles or detail items.

The *screen types* represent different ways GOLD lets you view information:

- *List screens* provide a listing of database items. There are both title list screens and detail-level list screens. The latter are also called browse mode screens, since they are used in browse mode to display detail items.

- *Entry screens* provide detailed information about one specific item, and they also are used to enter information. Entry screens can be displayed in either edit or add modes. They are available for both titles and detail items.

Note: In addition to the entry screens for database items, there are also entry screens for some options on the database and function menus.

Summary

With GOLD, you can edit and add to the databases at both the detail and title levels. In this section, you have seen entry screens in both edit and add modes at the detail level of the Project Database. The different modes and screen types used by GOLD have also been explained.

Note: Leave the browse mode screen displayed as you go on to the next section.

3.5 Help, Prompts, and Notes

Purpose

To make it easy to find your way, GOLD provides multi-layered Help and other onscreen aids. In addition, you can add your own Notes to titles or items in a database.

Help Screens

Multiple levels of Help screens are available throughout the program. GOLD also lets you edit these screens so that you can modify the Help text or add information specific to your work. (See Section 21.3 for instructions on editing Help.)

To see some examples of Help screens, begin on the browse mode screen and do the following:

1. Use the Arrow keys to move the highlight to the leftmost field on the screen, if it is not already there.
2. Press the F1 key.

Result: A Help screen is displayed (Figure 3.6). It contains Help for the currently highlighted field, the Sequence Code field.

Figure 3.6: Help Screen

3. Press the F1 key again.

Result: Another Help screen is displayed. This one provides Help for the current screen, the browse mode screen.

Note: Since not all fields require field-level Help, screen-level Help is sometimes the first Help displayed when you press F1.

4. Press the F1 key twice more to see additional levels of Help. These Help screens describe the current database (Project) and the currently available keys.

Note: The number of available Help levels varies within the program, but Keys Help is always the last (highest) level. You can exit Help at any point by pressing F10 or Esc.

5. After viewing the last Help screen, press F10 to exit Help.

Result: The browse mode screen is displayed.

Prompts, Status Messages, and Scroll Bars

In addition to the Help screens accessed by the F1 key, onscreen guidance is provided in the form of program prompts, status messages, and scroll bars.

Use the following steps to view examples of these tools:

1. From the browse mode screen, press F4 to display a detail item entry screen.
2. Examine the bottom of the screen. Notice the one-line of text on the message line. This prompt describes the purpose of the current field or the data to be entered there.
3. Press the Tab key to move from field to field. Notice how a different prompt is displayed for each field.
4. Now look at the status line, below the message line. This line is used to inform you of the current operational status of the program. At present, these items of information are shown:
 - OTHER indicates that a secondary entry screen is available by pressing Shift+F7.
 - PROJECT indicates the database you are currently working in.
 - EST shows a code indicating the Estimate Type. (The estimate types are explained in Section 5.3.)
5. Press the Esc key to return to the browse mode screen.
6. Notice the bar located on the far right of the screen. This *scroll bar* has an arrow at each end and a highlighted indicator near the top.

A scroll bar is used on screens where there might be more data available than is currently shown.

7. Press the Down Arrow key to move the highlight down the list of items.

Notice how, once you reach the bottom of the window, more items come into view. At the same time, the indicator in the scroll bar also moves down.

When you reach the end of the list, the items stop scrolling. The indicator is now at the bottom of the bar.

Note: Any time you see a scroll bar, the indicator can be used as a measure of where you are in the scrollable list or text and how much information there is above and below your location.

8. Notice that there is a second scroll bar along the bottom of the list window. This scroll bar indicates that there is additional data to the right of what is shown. This scroll bar works the same way as the other one, except that the movement is horizontal instead of vertical.

Notes

The *Notes* feature lets you attach descriptive information to titles or detail items in a database. You can access this feature whenever 7 NOTES is displayed in bright white in the action key window.

To see an example of a Note window, do the following:

1. From the browse mode screen, press the F7 key.

Result: A Note window is displayed (Figure 3.7). This window shows any Notes attached to the currently highlighted detail item.

Note: The Note window is currently displayed in view mode, which allows you to see but not change the text. To add or edit Notes, you must access the window in edit mode. This is done by first accessing the entry screen for an item or title, and then pressing the F7 key.

2. To dismiss the Note window, press F7 again.

Figure 3.7: Note Window

Summary

To make it easy to learn and use the program, GOLD is designed with a number of onscreen aids.

You can also use the software to attach your own Notes to titles or items in a database.

Note: Leave the browse mode screen displayed as you go on to the next section.

3.6 The Ten Action Keys

Definition

The *ten action keys* are keys that you use to perform common functions in GOLD. These keys are the same as the first ten function keys, labeled F1 through F10, on your keyboard.

If you followed the directions in Sections 3.4 and 3.5, then you have already used several of the action keys.

Action Key Window

At all levels of GOLD, the ten action keys and their functions are displayed in the *action key window* on the left side of the screen.

Not all keys are available at all levels of the program. Available keys are displayed in the window in bright white. Keys that are not currently available are displayed in brown (or low-intensity on monochrome monitors).

Toggle Action

The action keys work on a toggle or switch principle. Pressing the key once accesses the associated function. This also highlights the function in the action key window, which serves to remind you that the function is active.

Pressing the key a second time turns the function off (and usually returns you to the screen that was previously displayed).

Reference Table

This reference table lists the ten action keys and their functions.

Key	Function
F1 HELP	Displays a Help window providing information on the current field or screen. Refer to Chapter 21 for details on the Help system.
F2 ADD	Within a database, accesses a screen that allows you to add a title or detail item to a database. From the Main Menu Screen, accesses a screen that allows you to add a database of the selected type.
F3 TITLES	Displays the title list screen associated with the currently highlighted detail item or title entry screen.

Key	Function
F4 EDIT	Within a database, accesses a screen that allows you to change the database information for the current title or detail item. From the Main Menu Screen, accesses a screen that allows you to edit general information about the selected database.
F5 DETAIL	Displays the detail-level list screen associated with the current title. If there are no detail items for the current title, F5 displays the detail list screen for the title nearest to the current title.
F6 LOOKUP	Allows you to access a different database and then copy items back to the original database. See Chapter 16 for instructions on using the Lookup feature.
F7 NOTES	Lets you attach explanatory information to any title or detail item. See Section 15.2 for details on using Notes.
F8 SELECT	Displays a list of available choices for the current field or option. You can then select from the list by moving the highlight and pressing Enter.
F9 MENU	Highlights the menu bar at the top of the screen. This gives access to the function menus, when within a database, or to the database menus, when you are on the Main Menu Screen.
F10 EXIT	Exits the current screen or database level, and saves any changes you have made.

3.7 Function Menus

Purpose

In addition to the ten action keys, GOLD provides an extensive set of function menus for easy access to program functions within a database.

A Look at the Function Menus

Beginning at the browse mode screen, follow these steps to view the function menus.

1. Press the F9 key.

Result: The highlight moves to the top of the screen and the Add/Edit Menu is displayed. The menu is shown in Figure 3.8.

Figure 3.8: The Add/Edit Menu

2. Examine the menu. Use the Down Arrow key to move the highlight from one menu option to the next.
3. Use the Right Arrow key to move to the next menu, the Lookup Menu. Press the Right Arrow key again to look at each function menu in turn.

Note: Refer to the Reference Table below as you view each menu.

Reference Table

This table gives a brief description of each function menu. Refer to Part Four of this guide for detailed descriptions and instructions for each menu option.

Menu	Description
Add/Edit	Provides adding and editing functions for detail and title levels in the databases.
Lookup	Allows you to apply the Lookup function to specified databases. See Section 6.3 and 16.1 for details and examples.
Go To	Provides special functions for navigating and searching through the databases.
Mark	Lets you select an item or group of items in a database for moving, copying, or deleting.
Compute	Provides various calculation and repricing functions for the Project and other databases. Also used for working with formulas and parameters used with the Models Module.
Tools	Provides special functions used with Digitizer, Material Backup, HCAS, Print Single Element, and Get from Table.
Help	Lets you access and edit the program's Help screens.

Selecting Menu Options

You select an option from a function menu by moving the highlight to the option and pressing the Enter key. You can move the highlight by using the Arrow keys or the mouse.

Alternately, you can select an option by pressing the key corresponding to the highlighted capital letter in the option name. For example, to select the Edit Notes function from the top of the Add/Edit Menu, you press N.

Unavailable Options

All options are not always available on a menu. For example, you can only edit Owner Costs from certain places in a Project Database. Therefore, the Edit Owner option is not always available for use.

Menu options that are unavailable are displayed in gray (or in low-intensity on monochrome monitors).

Selecting Options Without Using the Menus

Each menu option is also labeled with a function key or key combination. These keys represent an alternative method of accessing the functions, *without accessing the menus*.

For example, the Edit/View Notes option on the Add/Edit Menu can be accessed either through the menu or by simply pressing the F7 key while working in a database.

Similarly, the Edit Other function can be accessed through the menu or, without displaying the menu, by pressing Shift+F7.

Once you are familiar with GOLD, you may choose to access functions directly from the keyboard. However, the function menus are always available for reference, and they are particularly useful if you are using a mouse. (See Section 3.10 for instructions on using a mouse with GOLD.)

Example: Using the Go To Menu

To prepare for the next section, use the Go To Menu now to exit the Project Database. Follow these steps:

1. Press the Right or Left Arrow key until the Go To Menu is displayed.
2. Press the Down Arrow key until the Exit Database option is highlighted. Then press Enter.

Result: The program exits the Project Database and returns to the Main Menu Screen.

Summary

While working in a database, you can access any of seven function menus. Alternately, all of the functions on the menus can be accessed through function keys or function key combinations.

3.8 Database Menus

Definition

The *database menus* are a set of seven menus that are accessible from the Main Menu Screen. These menus provide system-wide functions, such as setting up new projects, printing reports, managing databases, and working with other programs.

Accessing the Menus

To access the database menus from the Main Menu Screen, press the F9 key.

Result: The highlight moves to the menu bar and the Prepare Menu, the first menu on the left, is displayed. See Figure 3.9.

As with the function menus, you move from menu to menu by pressing the Left and Right Arrow keys.

Note: You can also access a database menu from the Main Menu Screen without using the F9 key. Simply press the first letter of the menu's title.

FUNCTION	PREPARE	REPORTS	SERVICES	ADMIN	UTILITIES	MCACES	DOS
1 HELP	Name Database Columns						
2 ADD	Set Breakdown Structure						
3 TITLES	Select 2nd View Columns						
4 EDIT	Set 2nd View Exceptions						
	Reprice Labor and Equip						
	Reprice Material						
	Copy Project Notes						
5 DETAIL							
6 LOOKUP							
7 NOTES							
8 SELECT							
9 MENU							
10 EXIT							

DATABASE	DIRECTORY	ID	NAME	Composer	GOLD
Project	C:\GOLD520...	DEMAIR	International Airport Remodel		
Models	C:\GOLD520...	MODELS	44-Building Models Library		
Assemblies	I:\GOLDDATA	ASSEM1	17-Building Assemblies Library		
Unit Prices	I:\GOLDDAT...	NAT92A	National FY92 Unit Price Book		
Crews	I:\GOLDDAT...	NAT92A	1992 National Crews Database		
Labor Rates	I:\GOLDDAT...	NAT92A	1992 National Labor Rates		
Equip Rates	I:\GOLDDATA	NAT92A	1992 National Equipment Rates		

Change the name and contents of database columns

EST R PROJECT v5.20F

Figure 3.9: The Prepare Menu

Reference Table

This table gives a brief description of each database menu. Refer to Part Five of this guide for detailed descriptions and instructions for each menu option.

Menu	Description
Prepare	Options on this menu are used to define the structure and format of a Project or Models Database. Other options are used to reprice a database with costs from a supporting database.
Reports	Used to select, format, print, and view reports.
Services	Allows you to manage databases, including functions such as selecting, copying, indexing, and deleting.
Admin	The Administrative Menu provides a System Administrator with options for managing system-wide information and controlling user access.
Utilities	Allows you to update record information in supporting databases.
MCACES	The MCACES Menu gives access to special programs for use by Department of Defense personnel.
DOS	This menu is used to end the GOLD session, to run other DOS programs, or to exit temporarily to a DOS shell.

Selecting Menu Options

Once you have displayed a database menu, you can select a menu option from the keyboard in either of two ways:

- Use the Down Arrow key to highlight the option, then press the Enter key.
- Press the letter key that corresponds to the capitalized, highlighted letter in the option.

Example: To select the Name Database Columns option on the Prepare Menu, simply press the N key.

3.9 Using the Keyboard

Introduction

In addition to the ten action keys, GOLD uses other specific keys and key combinations for navigating through the program and for data entry.

This section provides additional information about using the keyboard.

Key Combinations

The Alt (Alternate), Shift, and Ctrl (Control) keys are always used in combination with another key. Holding one of these three keys down when you press the other key changes the meaning of the other key.

This guide uses a plus sign (+) with the key names to indicate key combinations. For example, Ctrl+F7 means to hold the Ctrl key down and press the F7 key.

Letter Keys With Menus

Letter keys are one way of selecting menus and menu options in GOLD. Refer to Sections 3.7 and 3.8 for details.

Function Menu Key Combinations

In addition to the key combinations described below, many function and letter key combinations are available for working with database functions.

Since these functions are also available as options from the function menus, they are described in Part Four, and their corresponding key combinations are noted there.

Reference Table

This table lists the purposes of keys and key combinations used for navigation and data entry in GOLD.

Key(s)	Purpose
Tab	Moves the cursor to the next field.
Shift+Tab	Moves the cursor to the previous field. Note: Tab and Shift+Tab are the preferred keys for moving through the fields on data entry screens.
Ctrl+B	When editing Notes and Help, rejustifies the current paragraph, deleting any extra line breaks.
Backspace	Erases the character before the cursor and moves the cursor back one space.
Delete	Erases the character at the cursor.
Down Arrow	Moves the cursor to the beginning of the next field in the same or nearby column.
End	Moves the cursor to the end of the current field. On database menus, moves to the last option.
Ctrl+End	Moves the cursor to the last field on the current entry screen. Interrupts and cancels program processes, such as keyword search and report generation. Note: Do <i>not</i> use the Ctrl+Break keys to interrupt GOLD processing as this can distort the video monitor.
Enter	Selects a highlighted menu choice or title level. On an entry screen, confirms data entered in a field and moves the cursor to the next field.
Esc (Escape)	Exits the current function. Escape is similar to the F10 Exit key, except that F10 confirms data entered on the current screen, while Escape cancels the data.

Key(s)	Purpose
Home	Moves the cursor to the beginning of the current field.
Ctrl+Home	Moves the cursor to the beginning (upper left) of the current entry screen.
Insert	Switches between text insert mode (indicated by a block cursor) and text overwrite mode (indicated by a line cursor).
Left Arrow	Moves the cursor one character to the left. From the leftmost character, moves to the previous field.
Ctrl+Left Arrow	When editing Notes and Help, moves the cursor to the beginning of the previous word within the same field.
Page Down	<p>In a database list screen, moves the display down screen-by-screen to show more of the listing.</p> <p>From an edit mode entry screen, confirms any changes and moves to an entry screen for the next item in the database.</p> <p>From an add mode entry screen, confirms the addition of the item and displays a new entry screen.</p>
Page Up	<p>In a database listing, moves the display up screen-by-screen to show more of the listing.</p> <p>From an edit mode entry screen, confirms any changes and moves to the entry screen for the previous item in the database.</p> <p>From an add mode entry screen, confirms the addition of the item and switches from add to edit mode.</p>
Right Arrow	Moves the cursor one character to the right.
Ctrl+Right Arrow	When editing Notes and Help, moves the cursor to the beginning of the next word within the same field.

Key(s)	Purpose
Up Arrow	Moves the cursor to the beginning of the previous field in the same or nearby column.
Ctrl+Y	Line erase. When editing Notes and Help, deletes all characters on the line including and to the right of the cursor.

3.10 Using a Mouse

Introduction

Using a mouse is optional with GOLD. The mouse can execute many functions that otherwise require typing on the keyboard.

Mouse Buttons

Only the left and right mouse buttons are used. If you have a three-button mouse, the middle button is not used.

Normally, the left button is considered the primary button, and the right the secondary button, as in the Reference Table below. You can, if you choose, reassign these designations when you set up the GOLD software for the mouse. Refer to Section 2.3 for instructions.

Reference Table

Action	Purpose
Moving the mouse	Moves the highlight up and down or left and right. Same as using the arrow keys.
Clicking the left (primary) button	Selects an item on a menu or database screen. Same as pressing the Enter key.
Clicking the right (secondary) button	Selects the menu bar. Same as pressing F9. Click a second time to return from the menu bar.
Clicking both buttons	Exits an edit screen or database level, confirming any changes or additions. Same as the F10 key.

CHAPTER 4

PROJECT DATABASE OVERVIEW

Introduction

The *Project Database* is the work area where you actually develop an estimate. The titles and detail items entered here represent the various costs for a project, including Direct, Indirect, and Owner Costs.

The other databases available with GOLD are called *supporting databases* because they support the Project Database. Those databases are all used to store cost data that you can incorporate into an estimate by copying it into the Project Database.

Overview of the Estimating Process

The following steps outline the overall process of using GOLD to create an estimate. Some of the steps are optional, depending on your individual project.

1. You start by creating the new project in GOLD. Refer to Section 5.1 for instructions.

Alternately, you might begin by making a copy of a project template, or by importing an existing project from other software. These tasks are explained in Chapter 8.

2. Next, you define preliminary information about the project, by performing the following tasks:
 - Define the type of estimate
 - Name and format the project columns to appear on screens and reports.
 - Set the breakdown structure.

These tasks are explained in Sections 5.2 through 5.5.

3. You then build the estimate by entering titles (categories) at one or more levels, and by listing cost items for Project Direct Costs. GOLD provides a number of tools and methods you can use to accomplish this efficiently. See Chapter 6 for instructions.
4. If working with different contractors or other Indirect Costs, you also need to define these costs and apply them throughout the project, as described in Sections 7.2 through 7.5.
5. If you need to apply Owner Costs, you can do this while you are building the estimate or later. See Section 7.6.

6. Any time you make significant changes to the project, you should recalculate, as described in Section 19.1.

Note: If price changes are made to any of the supporting databases from which your project draws information, you may also need to use the repricing options explained in Sections 19.2 and 19.3.

7. At any stage of the process, you may print summary and detail reports. Printing instructions and sample reports are presented in Chapter 23.

Overview of Part Two

The chapters in Part Two describe the Project Database in detail and explain the tasks involved in creating an estimate.

- Chapter 5, "Starting a New Project," explains how you create a new Project Database based on the structure of an existing project. It also describes how GOLD controls the structure of a project, and how you can use the software to modify that structure.
- Chapter 6, "Working With Project Direct Costs," discusses the basics of adding, editing, and deleting titles and cost items, including the use of the Lookup feature. It also explains optional tasks, such as working with crews, assemblies, shipping costs, and overtime adjustments.
- Chapter 7, "Working With Indirect and Owner Costs," explains how to use GOLD to add distributed costs to the estimate. These include contractor and other Indirect Costs, as well as Owner Cost adjustments.
- Chapter 8, "Working With Existing Projects," provides instructions on accessing Project Databases from disk, creating and using project templates, and converting files created with other estimating software.

CHAPTER 5

STARTING A NEW PROJECT

Inherited Characteristics

The first task in starting a new project estimate in GOLD is to create the Project Database.

When you create a new Project Database, it *inherits* the column and breakdown structure of the Project Database that is currently selected in the database window.

Chapter Overview

This chapter explains how to create a new project based on the characteristics of an existing project. The chapter then provides instructions on how you can alter the inherited characteristics as needed.

The following sections are included:

- 5.1 Creating the Project Database
- 5.2 About Project Structure
- 5.3 Selecting the Estimate Type
- 5.4 Naming the Project Columns
- 5.5 Setting the Breakdown Structure

5.1 Creating the Project Database

Purpose

Creating the Project Database is the first task in starting a new project.

Selecting a Database or Template

As mentioned above, when you create a Project Database, it inherits the column and breakdown characteristics of the Project Database that is currently displayed in the database window.

Note: If no Project Database is currently selected, default characteristics are used.

Before creating the new project, you can select an existing project other than the one currently displayed. You can also use a *project template* to provide the inherited characteristics. Refer to Chapter 8 for instructions on selecting a Project Database or template.

Project Database Edit Screen

When creating a new Project Database, you fill in the Project Database Edit Screen (Figure 5.1). This screen is used to record the Project ID, title, and other information relevant to the project as a whole.

Figure 5.1: Project Database Edit Screen

Procedure

Follow these steps to create a new Project Database. Start from the Main Menu Screen, with the highlight on the Project Database line.

1. Press the F2 key.

Result: The Project Database Edit Screen is displayed.

2. Fill in the fields on the screen as needed. Refer to the Field Descriptions below.

Note: Except for the Database ID and Name fields, you will usually not need to change the inherited field entries on this screen when adding a new Project Database. However you can change the accessible fields, if necessary, either when adding the project or later.

3. When you have finished filling in the screen, press the F10 key.

Result: GOLD creates the new project. The Main Menu Screen is then displayed with the new project selected and highlighted in the database window.

Field Descriptions

This table describes the fields on the Project Database Edit Screen.

Field	Description
Database ID	A six-character code that identifies the project. May include letters, numbers, hyphens, and underscores (_), but no other symbols or spaces. All six characters must be entered.
Name	<p>Descriptive name of the database. Up to 32 characters are allowed. The name is displayed in the Name column in the database window when the database is loaded.</p> <p>Note: Additional lines of description can be defined on the Report Title Page Screen for printing on the front page of reports. See Section 23.5.</p>
<u>Last Reprice References Fields</u>	These fields are filled in by the program and indicate the IDs of the supporting databases last used to reprice the current database.
<u>Computation Field</u>	
Measurement System	<p>The units of measure to be used for storage of the data and display on the screen. Options are:</p> <ul style="list-style-type: none">• Original (the units as entered)• Metric• U.S. <p>Note: The units of measure printed in reports can be different, and are specified on the Report Selection Screen.</p>

Field	Description
<u>Currency Fields</u>	The following fields are used to compute currency conversions for the database. This allows you to transfer a project from one currency to another. Note: Refer to Section 9.4 for more information on currency conversion.
Currency Symbol	Symbol to be displayed in monetary fields on title list screens. Up to three characters can be used to abbreviate the currency, such as DM for Deutsche marks or YEN for yen.
Currency Description	Name of the currency.
Units for Store/Display	Units for storing monetary values and displaying them on the screen. Options are: O - Ones T - Tens H - Hundreds M - Thousands X - Ten-thousands
Units per U.S. Dollar	Ratio of the currency to one U.S. dollar. That is, the actual exchange rate of one U.S. dollar to the selected currency.

Editing the Project Database Edit Screen

Once you've created a Project Database, you can go back and edit the information on the Project Database Edit Screen at any time. To access the screen, first highlight the Project Database in the database window, then press the F4 (Edit) key.

5.2 About Project Structure

What Controls Project Structure

GOLD uses three major controls to determine project structure:

- Estimate Type
- Project columns
- Project breakdown structure

Estimate Type

The *Estimate Type* controls whether labor and equipment pricing depend on the Crews Database, and whether to reprice crew-dependent labor and equipment items automatically, using current Labor and Equipment Rates Databases, each time reports are run.

See Section 5.3 for details.

Project Columns

Project columns define the cost column breakdown of the project. Cost columns are designated for Project Direct Costs, such as material, labor, equipment, and so on, and also for Indirect and Owner Costs.

Example 1 - DEMAIR Project

The sample DEMAIR Project Database provided with GOLD is an estimate for an airport terminal project. This project uses the following columns:

Direct Costs: Material, Labor, Other.

Indirect Costs: Overhead, Home Office, Contractor's Profit, Bond Costs.

Owner Costs: Escalation Costs, Design Contingency, Phasing Contingency, Project Management Fees, Airport Authority Management.

Example 2 - MILEXM Project

The MILEXM Project Database, also included with the software, is an example of a military estimate. It has the following column breakdown:

Direct Costs: Manhours, Labor, Equipment, Material, Other

Indirect Costs: Overhead, Home Office, Profit, Bond.

Owner Costs: Escalation, Contingency, SIOH (Government Supervision, Inspection, and Overhead).

Project Breakdown Structure

The *project breakdown structure* defines the hierarchical structure of the project, which is used to total and report the costs in the project columns.

This hierarchical structure organizes cost items under various levels of categories called titles. GOLD lets you use up to six levels of titles in a project.

How many levels you use depends on the complexity of the project. A simple project with very few tasks might be summarized under a single Level 1 title. More complex projects might use all six levels.

Example 1: DEMAIR Project

The DEMAIR Project Database is organized by building system and uses five levels:

- Level 1 - Bid Items
- Level 2 - Systems
- Level 3 - Subsystems
- Level 4 - Work Groups
- Level 5 - Assemblies

Example 2: MILEXM Project

The MILEXM Project uses six title levels, as follows:

- Level 1 - Scope
- Level 2 - Facility
- Level 3 - System
- Level 4 - Subsystem
- Level 5 - Assembly Category
- Level 6 - Assembly

Defining Project Structure

When you create a Project Database, as defined in Section 5.1, the new project inherits the project structure and format of the Project Database that was previously displayed in the database window.

If you want to use this inherited structure, your next task is to begin building the project. To do so, refer to the instructions in Chapters 6 and 7.

If you need to change any part of the inherited structure, you must perform one or more of the following tasks.

- Select the Estimate Type, as explained in Section 5.3.
- Name the project columns, as explained in Section 5.4.
- Set the project breakdown structure, as described in Section 5.5.

5.3 Selecting the Estimate Type

Purpose

You select the Estimate Type when you want to choose from different options for pricing and repricing the project.

These options determine whether cost items in the Project Database make use of the Crews Database, and how cost items copied from supporting databases are repriced from those databases.

About Repricing

When cost items are copied into a project from a supporting database, their stored unit costs are copied with them. If these costs are later changed in the supporting database, they will differ from the costs in the project. *Repricing* the project ensures that costs copied from a supporting database are up to date.

- GOLD can reprice labor and equipment costs in the project from the currently selected Labor and Equipment Rates Databases. Depending on the Estimate Type chosen, repricing of labor and equipment costs can be done manually whenever you choose, or it can be done automatically whenever the estimate is recalculated or reports are run. See Sections 19.3 and 22.3 for instructions on manually repricing labor and equipment.
- Repricing of material costs can be done manually at any time from the current Unit Price Database. See Sections 19.2 and 22.4 for instructions.

Name Project Columns Screen

The Estimate Type field is the first field on the Name Project Columns Screen. This screen is shown in Figure 5.2.

Figure 5.2: Name Project Columns Screen

Accessing the Screen

To access the screen, first highlight the Project Database in the database window. Press P to access the Prepare Menu, then press Enter to select the Name Database Columns option.

Making a Selection

To select an Estimate Type, enter one of the following values in the field. The values are explained in the paragraphs that follow.

- U - Unit Costs; No Crews
- K - Crews with Reprice Key
- A - Crews with Auto Reprice
- C - CACES Mode (with Auto)

U - Unit Costs; No Crews

Select this value when you are not using crews to compute labor and equipment costs within cost items in the estimate.

This Estimate Type has the following effects:

- When copying cost items into the project from the Unit Price, Assemblies, or Models Database, the program uses the currently computed unit labor and equipment costs for the items.
- Crew IDs and crew output values stored with these cost items are also copied into the project, but they are not used to compute costs.

Note: These values are stored in the project so that they can be used for computing costs if you decide to change the Estimate Type. See Types K and A below.

- Labor and equipment unit costs currently stored in the Project Database are used when you recalculate the project or run reports. You can adjust these labor and equipment costs independently in the Project Database.

Note: You can manually update these costs using the rates currently stored in the Labor and Equipment Rates Databases by choosing the Reprice L & E function on the Compute Menu or the Reprice Labor and Equipment option on the Prepare Menu. See Sections 19.3 and 22.3 respectively.

K - Crews With Reprice Key

Use this selection when you are working with crews but *do not* want the estimate automatically repriced from the supporting databases.

This selection has the following effects:

- When copying cost items into the project from the Unit Price, Assemblies, or Models Database, the program uses the currently computed unit labor and equipment costs for the items.
- Crew IDs and crew output values stored with these cost items are also copied into the project, and are *linked* to the labor and equipment unit costs of the items.

This makes it possible to adjust the unit labor and equipment costs of the item by adjusting the crew output. See Section 6.5 for information.

- Labor and equipment unit costs currently stored in the Project Database are used when you recalculate the project or run reports. Because these costs are linked, adjusting one of them will automatically adjust the other, and the crew output.

Note: As with Type U, you can manually update these costs with the costs currently stored in the Labor and Equipment Rates Databases by choosing the Reprice L & E function or the Reprice Labor and Equipment option. See Sections 19.3 and 22.3 respectively.

A - Crews With Auto Reprice

Choose this selection when you are working with crews and you *do* want the estimate automatically repriced from the Labor and Equipment Rates Databases.

Estimate Type A has these effects:

- When copying cost items into the project from the Unit Price, Assemblies, or Models Database, the program recomputes each labor and equipment cost based on the currently selected Labor and Equipment Rates Databases. (For cost items containing crew IDs, the current Crews Database is also used to recompute these costs.)
- Whenever you recalculate the estimate or run reports, the program automatically reprices each labor and equipment unit cost based on the currently selected Labor and Equipment Rates Databases. For cost items containing crew IDs, the currently selected Crews Database is referenced for the crew compositions during the repricing.

C - CACES Mode (With Auto)

This selection gives the same capabilities as Type A. In addition, this selection provides compatibility with the U.S. Army Corps of Engineers CACES standard.

After Making a Selection

After making your selection, do one of the following:

- Change the project column information by entering data on the rest of the screen. Refer to the next section for details.
- Press the F10 key to keep the same Project Column information and exit.

Changing the Estimate Type

You can change the Estimate Type at any time while working on the project.

Caution: If you have been working on a project with the Estimate Type set to U and have edited unit costs for items containing crew references, these costs could be altered by changing to a different Estimate Type.

5.4 Naming the Project Columns

Purpose

This task determines the format and contents of cost columns shown on project screens and printed reports.

You can define as many as five columns each for Project Direct Costs, Indirect Costs, and Owner Costs.

Column Types

GOLD provides certain predefined column types for Direct, Indirect, and Owner Costs. These predefined types have specific computational characteristics, which are described in the paragraphs that follow.

The program also allows you to define user-named columns.

Caution

GOLD allows you substantial freedom in choosing the location of cost columns on screens and reports. However, once you have added cost data to a project, changing the order of the cost columns will *not* relocate your data to the appropriate column, and may therefore result in invalid output.

You can safely add columns to the right of existing columns, whether the existing columns already contain data or not. Also, you can prevent columns from being printed on reports simply by entering 0 for that column in the Report Width field on the Name Project Columns Screen (described later in this section).

Project Direct Cost Types

Following are the predefined Direct Cost column types and how they are computed by the program.

Manhours

The program totals the number of labor hours required for each cost item and at each title level and places that number in the Manhours column. If crews are used, the unit Manhours value for an item equals the total number of labor hours in the crew divided by the crew output figure.

This column type is unique in that it is a measurement of hours rather than costs. Manhours are not used in project cost calculations, but they are measured and reported as an aid in project scheduling.

Labor

The program places the total calculated labor cost associated with an item or title in this column.

For cost items copied from a supporting database, these labor costs are repriced from the current Labor Rates Database whenever you choose the Reprice L & E function or Reprice Labor and Equipment menu option. See Sections 19.3 and 22.3 respectively.

If the Estimate Type is A (Crews with Auto Reprice) or C (CACES Mode), the labor costs are repriced automatically whenever you recalculate the estimate or generate reports.

Equipment

The program places the total calculated equipment cost associated with an item or title in this column.

For cost items copied from a supporting database, the equipment costs are repriced from the current Equipment Rates Database under the same circumstances as noted above for Labor costs.

Material

The program places the total material cost associated with an item or title in this column. The total accumulated in this column for the entire project is used to compute sales tax, based on the sales tax percentage entered on the Report Title Page Screen. (See Section 23.5.)

For cost items copied from a supporting database, the material costs are repriced from the current Unit Price Database whenever you choose the Reprice Material function from the Compute Menu or the Reprice Material option from the Prepare Menu. See Sections 19.2 and 22.4, respectively.

Shipping

If you define Shipping as a column, shipping costs are computed for every item that has a value recorded in the Equivalent Shipping Weight field on the cost item entry screen.

The program multiplies the item's equivalent shipping weight by the shipping rate you enter on the Adjust Pricing Screen and places the result in the Shipping column for the item. The sum of all shipping costs under any title is computed and placed in this column on the title entry screen. See Section 6.8 for details.

Subcontractor

This column type can be used within a project cost item to store work quoted by a subcontractor to the currently assigned contractor. This quote may include labor, equipment, material, sales tax, and other costs, as well as the subcontractor's markups. By entering the quote as a lump sum, you can insure that:

- Sales tax will not be applied to material a second time, since the program applies sales tax only to costs in the Material column.
- The quoted cost will be marked up as subcontracted work according to the factors entered for the currently assigned contractor.

If you use the Subcontractor column in this way, the subcontractor need not be defined as a record under the Project Information Record or have an ID assigned to them. This is because this subcontractor's costs are entered into the project with all markups included, so GOLD will not need Indirect Cost percentages or amounts defined in order to calculate the markups.

Project Indirect Cost Types

Indirect Costs may include contractors' overhead, profit, and bond costs, as well as other costs that are distributed over all or part of a project.

You enter Indirect Cost data on the primary and secondary Contractor Entry Screens, as described in Chapter 7. For each of the predefined types, you can enter an amount for the costs or use the program to compute a percentage. Different computation options are also provided, specific to the column type.

The predefined types are as follows.

Overhead

This column represents contractors' overhead costs. This column may be calculated as a percentage of Direct Costs only, or as a running percentage based on the sum of Direct Cost and other Indirect Cost columns that you designate. Overhead can also be computed separately on subcontractors, or it can be figured directly as the sum of specific cost items that you enter under each contractor's record. See Sections 7.3 and 7.4.

Profit

This column type represents contractors' profit. As with overhead, the cost can be calculated as a direct or running percentage, or it can be computed separately for subcontractors. Another option is to compute profit according to profit-weighted guidelines as used in U.S. Government contract procurement practices. See Sections 7.3 and 7.4.

Bond

The Bond column shows contractors' bond costs. This figure can be computed as a direct or running percentage. You can also choose to compute the bond costs based on data tables that store values for each bond class. These tables are maintained by the System Administrator, through the Admin Menu. Refer to Sections 7.3 and 7.4, and also to Section 25.2.

Project Owner Cost Types

Project Owner Costs are computed after contract costs (Direct plus Indirect Costs) and are used to estimate costs outside of typical construction contracts. Owner Costs can be assigned at the lowest title level and also at the default Owner Cost Level, which you specify on the Set Breakdown Structure Screen. (See Section 5.5).

You can use the predefined Owner column types described below, and you can also select user-named columns. For user-named columns, you can enter an amount or compute the costs based on an entered percentage. Refer to Section 7.6 for details. Examples of user-named cost columns you might define include:

- Owner Furnished Property
- General and Administrative Costs
- SIOH (Government Supervision, Inspection, and Overhead)

The two predefined types are Escalation and Contingency.

Escalation

Defining an Escalation column enables you to use GOLD to compute an escalation value based on starting and ending escalation indexes, which you enter on the Owner Cost Screen. See Section 7.6 for details. You can also enter the value for this column as a percentage or an amount.

Contingency

This column can be computed as an amount or a percentage. The only difference between Contingency and user-named columns is that the value of the Contingency column is transferred to the Contingency column in the project's 2nd View. See Volume 2, Chapter 8 for information on the optional 2nd View capability.

Renaming Predefined Columns

In addition to defining user-named columns, you can rename the predefined column types on the Name Project Columns Screen. Renaming a predefined column does not affect its calculation.

For example, you might choose to rename the Equipment column as "Plant."

Accessing the Screen

To access the Name Project Columns Screen, start at the Main Menu Screen with the highlight on the Project Database. Press P to access the Prepare Menu, then press Enter to choose the Name Database Columns option.

The screen is illustrated in Figure 5.2, in the previous section.

Completing the Screen

Complete each field on the screen by typing in the data and pressing the Enter key. Refer to the Field Descriptions below for information.

Note: Refer to the previous section for information on the Estimate Type field.

When defining cost columns, fill in the fields from left to right across the screen. Any unused columns (X in the Column Type field) should be to the right of the screen.

- To view and select from a list of options for a multiple-choice field, press the F8 key.
- To view the options for a multiple-choice field one at a time, press the Space Bar.

When you have finished filling in the screen, press the F10 key to exit and save your changes.

Note: You can also exit at any time without saving your changes by pressing the Esc key.

Field Descriptions

Field	Description
<u>Project Direct Cost Columns</u>	
Col Type	The kind of Direct Cost listed in the column. Values are: H - Manhours L - Labor E - Equipment M - Material S - Shipping C - Subcontractor U - User Named X - Unused Column
Rep Width	The width of the column on printed reports. Values are from 0 - 20 characters. The default is 12. Note: Enter 0 if you want the column displayed on screens but not printed.
Title	Title to appear on the column. Except for user-named columns, the title is derived from the Col. Type field. You can, however, change the name of a predefined column without changing its calculation procedures. Up to 8 characters are allowed.
<u>Project Indirect Cost Columns</u>	
Col Type	The kind of indirect cost item listed in the column. Codes are: O - Overhead P - Profit B - Bond U - User Named X - Unused Column
Rep Width	Same as for Project Direct columns, above.

Field	Description
Title	Same as for Project Direct columns, above.
<u>Project Owner Cost Columns</u>	
Col Type	The kind of owner cost item listed in the column. Codes are: E - Escalation C - Contingency U - User Named X - Unused Column
Rep Width	Same as for Project Direct columns, above.
Title	Same as for Project Direct columns, above.

5.5 Setting the Breakdown Structure

Project ID

Each title in a project is assigned a unique ID called the project ID. This ID specifies the title's place in the overall hierarchy. This ID is always displayed on the title list screen when the title is displayed.

Example: A Level 3 title might have a project ID of 12.04.06. In this case, 12 identifies the Level 1 title under which this title is found, 04 identifies the Level 2 title, and 06 identifies the actual title at Level 3. In this example, the periods are defined as trailing separators for each level.

Set Breakdown Structure Screen

The Set Breakdown Structure Screen (Figure 5.3) is used to define the overall project hierarchy. This includes the name of each project level and the number of characters used to identify that level in a project ID.

FUNCTION	PROJECT BREAKDOWN				
	ID	Length	Trail Sep	Level Title	2nd View Order
1 HELP	Level 1 ID :	3	.	Bid Item	2
2 ADD	Level 2 ID :	2	N	System	2
3 TITLES	Level 3 ID :	1	.	Subsystem	2
4 EDIT	Level 4 ID :	1	N	Group	2
5 DETAIL	Level 5 ID :	1	.	Assembly	2
6 LOOKUP	Level 6 ID :	0	N		2
7 NOTES	Owner Cost Level : 2				
8 SELECT					
9 MENU					
10 EXIT					

Character used to separate title levels in database IDs: EST R PROJECT v5.20F

Figure 5.3: Set Breakdown Structure Screen

When to Use

You must set the breakdown structure before you start listing items in the project. Once you add titles or detail items, you cannot modify the breakdown structure, except to add more title levels.

Note on Alternate Costs

If you are working with alternate costs in an estimate, the usual method is to define each alternate situation as a separate Level 1 title. The decision to use alternate costs may affect the number of title levels or the length of project IDs you need to define.

See Section 6.11 for more information on working with alternate costs.

Accessing the Screen

To access the Set Breakdown Structure Screen, begin on the Main Menu Screen with the highlight on the Project Database. Press P to display the Prepare Menu, then press B to select the Set Breakdown Structure option.

Completing the Screen

Complete each field on the screen by typing in the data and pressing the Enter key. Refer to the Field Descriptions below for more details.

When you have finished filling in the screen, press the F10 key to exit and save the breakdown structure.

Note: You can also exit at any time without saving your changes by pressing the Esc key.

Field Descriptions

Following are the fields on the Set Breakdown Structure Screen. The first four fields are repeated for each project level you choose to define.

Field	Description
<u>Project ID</u>	
Length	Number of characters used to identify this level in a project ID. Valid range is 2-6 characters. The total for all the levels used cannot exceed 16, excluding separators.
Trail Sep	Trailing Separator. A character or symbol used to separate this level's identifier in the project ID from the identifier of the next level. Enter a space to use a space as the separator. Enter N to designate no separator.
Level Title	Optional name used to describe all the titles at this level of the project. Up to 8 characters are allowed. This name is shown on screens to help you find your way through a project. Examples: Bid Item, Feature, Floor#, SubCntr.
2nd View	Order of this title level's ID segment when reorganized by 2nd View. The 2nd View capability is described in Chapter 8 of <i>Volume 2, Advanced Options</i> .
<u>Owner Cost Level</u>	This field identifies which project level (0-6) is the default level for applying Owner Costs. Refer to Section 7.6 for more information on Owner Costs. Default for this field is 0, which indicates that Owner Costs are applied to the whole project.

CHAPTER 6

WORKING WITH PROJECT DIRECT COSTS

Chapter Overview

This chapter explains how to build a project by adding titles and detail cost items. The chapter also discusses how to edit and delete titles and items after they've been entered.

To help you build estimates most efficiently, GOLD provides varied and powerful options for inputting and computing Direct Cost data. These features are also explained in this chapter.

These topics are included in Chapter 6:

- 6.1 Adding Titles
- 6.2 Adding Cost Items
- 6.3 Using Lookup From the Project
- 6.4 Editing and Deleting

- 6.5 Working With Crews
- 6.6 Working With Crews as Assemblies
- 6.7 Adjusting for Overtime
- 6.8 Working With Shipping Costs
- 6.9 Working With Assemblies
- 6.10 Using Modifiers in the Project
- 6.11 Working With Alternate Costs

Tutorial

If you are using GOLD for the first time, you can use the instructions in this chapter in combination with the tutorial, "Learning GOLD," which is presented in Appendix A of this volume.

Accessing the Project

You access a project from the database window on the Main Menu Screen. Move the highlight to the Project Database line and press Enter.

Result: The project is loaded and the highest level of titles (Level 1) is displayed.

Note: If you need to select a project that is not currently displayed in the database window, you can press F8 with the highlight on the Project Database line to see a list of available projects. (Refer to Section 8.1 for detailed instructions.)

How Costs Are Displayed

GOLD stores costs of up to ten billion minus one, and as small as one ten-thousandth of a dollar (or other unit of currency). In the Project and other databases, GOLD uses *exponential notation* to display costs that would otherwise not fit in fields on the screen.

Note: On printed reports, you can choose the column width in order to display your largest or smallest numbers.

Unit Costs

On the screen, unit costs of up to 999,999.99 are displayed. Above this, the number is rounded off and displayed with a notation indicating the number of places to move the decimal point (that is, exponential notation).

Examples:

- 1,000,000 is displayed as 1.00E+006
- 15,894,542 is displayed as 1.59E+007

Total or Extended Costs

Total or extended costs up to 9,999,999 are displayed with commas. For figures above 10 million, the commas are dropped. For total costs of one billion or more, exponential notation is used.

Examples:

- 15,894,542 is displayed as 15894542
- 1,248,786,231 is displayed as 1.25E+009

About "Database ID"

The term *database ID* has two separate meanings in this manual.

- It refers to the six-character ID that uniquely identifies a database *as a whole*. This use of the term was introduced in Chapter 3. The term is used in this sense whenever the text refers to entire databases, as on the database edit screens discussed in Section 9.4.
- The term also refers to the set of numbers or characters that identifies an individual title or detail item *within* a database. The term is used in this sense in Chapter 6, and whenever individual items or titles are discussed.

6.1 Adding Titles

When to Use

You begin building a project by adding titles, starting at the Level 1 title list screen. You can also add titles at any time during the process of developing the estimate.

Definitions

In discussing database structure in GOLD, the terms "title" and "title element" have specific meanings.

- A *title*, as previously defined, is a category in a database. This term is also applied to the database record representing that category. As mentioned previously, up to six levels of titles can be defined in a database hierarchy.
- A *title element* (or *element*) is defined as a title at any level plus all of the subtitles and detail items beneath it. If a database hierarchy is envisioned as a tree structure, then a title element can be said to represent one branch of that tree.

Entry Screen

You add titles by accessing and filling out a title entry screen, which is shown in Figure 6.1.

FUNCTION
1 HELP
2 ADD
3 TITLES
4 EDIT
5 DETAIL
6 LOOKUP
7 NOTES
8 SELECT
9 MENU
10 EXIT

001-09 ELECTRICAL

Subsystem ID : █

Subsystem Name : ██████████

Subsystem Quantity : ████████ █

Contractor : █

Contractor Override : No

Category Code : ████████

Cost Override : No

MATERIAL	LABOR	OTHER	TOTAL
0.00	0.00	0.00	0.00
0	0	0	0

Part of the title's database ID assigned at this level

OTHER **EST K PROJECT** v5.20

Figure 6.1: Title Entry Screen, Project Database

Secondary Entry Screen

In some cases, you also use a secondary entry screen when defining a title. This screen is accessed from the primary entry screen by pressing Shift+F7.

Various uses of this screen are explained in Sections 6.6, 6.7, and 6.9.

Accessing the Entry Screen

To access the primary entry screen in add mode, do one of the following:

- If you need to add a title at the level of the current title list screen, press the F2 key.
- If you need to add a title at the level below the current screen, press Shift+F3.

Note: These functions are also available through the Add/Edit function menu. Shift+F3 is the speed key combination that allows you to access the Add Subtitle function without going through the menu.

Default Data

If you are adding to an existing list of titles, then the entry screen will contain data copied from the title that was highlighted when you accessed the screen. This default data is shown in brown or low-intensity. It is provided to save you keystrokes, since some field information will often be the same from one title to the next.

Enter a number in the ID field to specify the new title's place in the hierarchy (see below). Then edit the rest of the data as needed to define the new title.

Completing the Entry Screen

Refer to the Field Descriptions below for the data to enter in the fields. After filling in a field, press the Enter key to move to the next field.

When you have finished filling in the screen, do one of the following:

- Press the Page Down key to add the title and begin adding another title at the same level.
- Press the F10 key to add the title and exit.

Note: You can also exit at any time without saving the data by pressing the Esc key.

Field Descriptions

The following table describes the fields on the primary entry screen for project titles. On an actual screen, the ID, Name, and Quantity fields are labeled with the name of the level (that is, whatever name you assigned to this title level on the Set Breakdown Structure Screen).

Field	Description
ID	<p>The part of the title's project ID assigned at this title level. (The full project ID for a title consists of this entry plus the IDs of any higher-level titles under which this title belongs.)</p> <p>The number of characters allowed in this field depends on the Length you assigned to this level on the Set Breakdown Structure Screen.</p>
Name	<p>Name of the title. The name should describe the element of the project containing all titles and cost items that fall below this title.</p> <p>Note: You can access additional space to describe the title by pressing F7 and using the Notes feature. See Section 15.2 for details.</p>
Quantity	<p>Quantity associated with this element of the project. Used with the unit of measure in the next field.</p> <p>Entering a quantity value here enables GOLD to compute a unit cost for this title element.</p> <p>Also, if you use the Cost Override (explained below), you must enter a Quantity in order to compute extended costs based on the unit costs that you enter.</p>

Field	Description
Unit of Measure	<p>This unlabeled field contains the unit of measure relevant to the quantity. This is the unit applied to unit costs at this title level.</p> <p>Examples:</p> <p>SF - square feet CY - cubic yards</p> <p>Refer to Appendix B for a list of valid units of measure.</p>
Contractor	<p>Two-character ID of a contractor assigned to this title.</p> <p>If the Contractor Override field below is set to Yes, then this ID overrides any Contractor IDs set at lower title levels.</p> <p>Refer to Chapter 7 for more information on contractors.</p>
Contractor Override	<p>Enter Yes to override any Contractor IDs set at lower levels with the Contractor ID for this title. Otherwise, leave this field set to No (default).</p>
Category Code	<p>This field can be used to enter Category Codes as used by the Department of Defense for ENG Form 3086 cost reporting. Refer to Chapter 15 in Volume 2 for information on the ENG3086 Interface.</p>

Field	Description
Cost Override	<p>Enter one of three choices:</p> <p>N - Sum from detail. This choice will allow this title to accumulate the costs from the details or subtitles beneath this title. This is the default.</p> <p>Y - Override Pricing here. Entering Yes in this field allows you to override the total calculated costs shown at the bottom of the screen and to enter costs directly at this level.</p> <p>A - Use Assemblies Database. This choice allows you to take the pricing directly from the currently highlighted assemblies database without storing the detail items in the project. To use this choice, change this field to A - Use Assemblies Database, then use Lookup into the Assemblies Database. Find the assembly you need and Confirm Lookup. Change the title quantity to the appropriate quantity. This title will now have the characteristics of a Cost Override title, taking its pricing from the assemblies database.</p> <p>Note: On title list screens, an “at sign” (@) is listed next to the cost for any title at which a cost override has been applied.</p>

Cost Fields

The fields on the lower part of the screen correspond to the Direct Cost columns defined on the Name Project Columns Screen. (See Section 5.4.) These fields will show all zeroes until you do one of the following:

- Add cost items below the title and recalculate the element or project using the Recalculate function (Shift+F2 keys). (The project is also recalculated automatically if you run reports.)
- Set the Cost Override field to Yes and then enter unit costs. By entering a Quantity value, you can then calculate the extended costs.

Unit Costs

The fields on the first row represent unit costs in each column. For GOLD to calculate unit costs for a title, a value must be entered in the Quantity field above.

Extended Costs

The fields on the bottom row show the computed extended costs for the title.

Note: If contractors and subcontractors are defined, and the Cost Override field is not set to Yes, the extended costs will include any subcontractors' markups. In other words, they will represent the costs to the prime contractor. See Chapter 7 for information on contractors and cost markups.

6.2 Adding Cost Items

Where to Add Cost Items

You can begin adding detail cost items beneath a title at any time, starting at any level title screen. You do not have to use the complete project hierarchy.

In other words, you might add cost items beneath Level 2 titles in one part of the project, while adding them beneath Level 5 titles in another part. In this way, the more complicated portions of a project can be broken down to greater depth than is necessary with less complicated portions.

Restriction: The only restriction is that you cannot add cost items beneath a title for which you have defined a lower level of titles.

Entry Screen

You add cost items by accessing and filling out a cost item entry screen, which is illustrated in Figure 6.2.

FUNCTION

1 HELP

2 ADD

3 TITLES

4 EDIT

5 DETAIL

6 LOOKUP

7 NOTES

8 SELECT

9 MENU

10 EXIT

001-092.11. LIGHTING FIXTURES INSTALLED

Project Seq/Database ID : USR

Description :

Quantity : EA

Contractor :

Work Category :

Print Notes : Yes

UPB Cost Override : None

Material Price Updated : 04/24/92

MATERIAL LABOR OTHER TOTAL

0.00 0.00 0.00 0.00

0 0 0 0

First part of the item's Unit Price Database ID; or user-defined ID

OTHER EST N PROJECT v5.20F

Figure 6.2: Cost Item Entry Screen, Project Database

Secondary Entry Screen

In some cases, you also use a secondary entry screen when defining the cost item. This screen is accessed from the primary entry screen by pressing Shift+F7.

The uses of the secondary entry screen are discussed below and also in Sections 6.5 and 6.8. The screen is shown in Figure 6.3.

Accessing the Cost Item Entry Screen

To access the primary cost item entry screen in add mode, do one of the following:

- To add cost items beneath a highlighted title on a title list screen, press Shift+F5.
- To add to an existing list of cost items, press the F2 key from the browse mode screen.

Default Data

If you are adding to an existing list of cost items, then the entry screen is displayed with data copied from the cost item that was highlighted when you accessed the screen. As with titles, this default data is provided to save you keystrokes for fields that require the same entries from one item to the next.

Defining the Cost Item

You can use any of the following methods to define a cost item in the Project Database:

- Copy an item from the Unit Price Database.
- Copy an item from the Labor or Equipment Rates Database.
- Create your own cost item.

Copying a Unit Price Database Item

Use these steps to copy an item from the Unit Price Database:

1. If you do not know the item's ID in the Unit Price Database, use the Lookup feature to search the database and then copy the item.

Press F6 to display the Lookup Menu, then select Unit Prices as the database to be searched. See Section 6.3 for detailed instructions.

Note: If you do know the item's ID in the Unit Price Database, you can simply type it in the Database ID field and press Enter. The program then automatically copies the item and displays its data on the screen.

2. After copying the cost item, enter the quantity appropriate to your estimate in the Quantity field.

3. If you choose, you can also adjust the costs for the item shown on the bottom of the screen. (Refer to the Field Descriptions below.)

Notes:

- If you later reprice the estimate, the costs will be changed back to those listed in the supporting databases. See Section 5.3 for information on repricing.
- If you are working with crews (the Estimate Type is K, A, or C) the labor and equipment costs are tied together. Adjusting one cost automatically changes the other. For example, if you increase the labor cost by 10%, the equipment cost is automatically increased by 10% as well.

Therefore, you cannot independently adjust labor or equipment costs of crew-dependent items in the Project Database. If you need to adjust labor or equipment costs independently for these items, you can do so in the Labor and Equipment Rates Databases. You can, however, adjust the crew's hourly output figure in the project. Refer to Section 6.5 for information.

Copying a Labor or Equipment Item

You can also copy detail cost items directly from the Labor or Equipment Rates Databases. These items are listed as individual items in the project, with labor or equipment costs independent of the crew compositions stored in the Crews Database.

Note: Typically, you would use this method of adding items if you are working with crews as assemblies, which is discussed in Section 6.6.

To add a Labor or Equipment Rates Database item to the Project Database, first display the detail item entry screen in add mode, then do the following:

1. Use the Lookup feature to search the appropriate database and then copy the item.

Press F6 to display the Lookup Menu, then select the database to be searched. See Section 6.3 for detailed instructions.

Note: If you copy an Equipment Rates Database item, GOLD may ask you if you also want to copy linked items or attachments. These are additional, related items that you can choose to copy at the same time. Refer to Section 13.3 for more information.

2. After copying the item, enter the quantity appropriate to your estimate in the Quantity field.
3. If needed, you can adjust the labor or equipment costs shown on the screen, or you can add data in the other cost fields. (Refer to the Field Descriptions below.)

Note: If you later reprice the estimate, the item's labor or equipment cost will be changed back to the cost recorded in the source database. See Section 5.3 for information on repricing.

Applying Different Rates

When you copy an item from the Labor Rates Database, GOLD automatically applies the standard laborer rate for the item. Similarly, when you copy an item from the Equipment Rates Database, GOLD automatically applies the rate for average working conditions for the equipment.

- For labor items, you can choose to substitute an apprentice or foreman rate. These rates are computed as adjustments to the laborer rate, as described under "About Foremen and Apprentice Rates" in Section 9.4.
- For equipment items, you can choose to substitute a standby rate or a rate for severe conditions (if one is available). These rates are stored separately for items in the Equipment Rates Database. (See Section 13.3.)

To apply a different rate for a labor item or equipment item, you use the secondary cost item entry screen, which is illustrated in Figure 6.3. Field Descriptions for the secondary screen are provided below.

1. First copy the item from the Labor Rates Database or Equipment Rates Database, as described above.
2. Press Shift+F7 from the primary entry screen to display the secondary screen.
3. With the cursor in the first field (Item Type) press the F8 key to see a list of options.
4. Move the highlight through the list window to choose the rate you want
 - For labor items, choose Apprentice or Foreman
 - For equipment items, select Severe Equipment or Unused/Standby Equipment.

With the highlight on the type of rate you want, press the Enter key.

Result: Your selection is placed in the Item Type field.

5. Press F10 to save the data and return to the primary entry screen.

```

001-092.11.  LIGHTING FIXTURES INSTALLED
  FUNCTION
  1  HELP
  2  ADD
  3  TITLES
  4  EDIT
  5  DETAIL
  6  LOOKUP
  7  NOTES
  8  SELECT
  9  MENU
 10  EXIT

Project Seq/Database ID :      USER      [REDACTED]
Description : [REDACTED]

  Crew [REDACTED] ID :

Hourly Output :           0.0000 EA

Unit Weight :           0.0000
Unit Volume :           0.0000

Equiv Shipping Weight:    0.0000 KG

TOTAL
0.00

0      0      0      0

Item Type (Crew, labor type, or Equipment).  <F8> to see choices.
OTHER EST R PROJECT v5.20F

```

Creating Your Own Cost Item

You can then use the secondary entry screen (Shift+F7) to reference a crew for the item or to add shipping cost information. Refer to Sections 6.5 and 6.8 respectively for details on these two options.

Field Descriptions

Primary Entry Screen Fields

This table describes the fields on the primary entry screen for project cost items. The column names on the lower portion of the screen are defined on the Name Project Columns Screen. (See "Cost Fields," below.)

Field	Description
Project Seq/	<p>The Sequence code has three possible uses. The first use is to determine the order in which items are displayed and printed. If you do not use sequence codes, the items are listed in the order in which they were entered.</p> <p>The second use is to sequence detail cost items so that when the project is brought up in the Scheduling Interface, the items will be already sequenced to produce the desired duration for the lowest title level.</p> <p>The third use is to store the Item Selection Parameter Worksheet reference code, when using Item Selection Parameter Worksheets to select detail items.</p> <p>Up to four characters are allowed.</p>
Database ID	<p>This field consists of three parts.</p> <p>The first part is a 3-character item source ID filled in by the program. All items that you define are tagged USR. Other codes come from the Department of Defense Unit Price Database, as follows:</p> <p>MIL - Building construction item. CIV - Civil works item. HTW - Hazardous waste construction item.</p> <p>Note: System Administrators can change source IDs through use of the Database Utilities, which are described in <i>Volume 2, Advanced Options</i>.</p> <p>The second and third parts of this field are each five-character IDs used in the Unit Price Database to identify this item. For user-created items or items copied from the Labor or Equipment Rates Database, you can enter an identifier here.</p>

Field	Description
Description	Description of the item. Read from the source database for copied items. Entered here for user-created items.
Quantity	Quantity of the item to be used in the estimate. Used in conjunction with the Unit of Measure field.
Unit of Measure	<p>Unit used to describe the quantity.</p> <p>Examples:</p> <p>SF - square feet CY - cubic yards.</p> <p>Refer to Appendix B for a list of valid units of measure.</p>
Contractor	<p>Two-character ID of a contractor assigned to this cost item.</p> <p>Leave this field blank to assign the item to a contractor assigned at a title level.</p> <p>Note: The program will not allow you to make an entry in this field if you specified Contractor Override for a title directly above this item at any title level.</p> <p>Refer to Chapter 7 for more information on contractors.</p>
Work Category	<p>You can use this field to enter a building system code for each cost item in the project. You can then produce system summary reports showing project costs sorted according to the building systems hierarchy. See Section 23.16 and also Section 14.1 for more information.</p> <p>Note: In some cases (for example, in cost items copied in with assemblies from the supplied Assemblies Database) this field may already be filled in with a system code by the program.</p>

Field	Description
Print Notes	Indicates whether Notes attached to the item will be printed on reports.
UPB Cost Override	<p>This field is filled in by the program. The field indicates whether the costs for this item have been changed since the item was created in the Unit Price Database. Values are:</p> <ul style="list-style-type: none"> • Labor/Equip - A user has modified the labor or equipment unit costs or the crew output, or has applied an override to the crew referenced by the item. • Material - A user has modified the material unit cost. • Both - A user has modified both labor, equipment or crew data and material data. • None - No overrides have been made. The item still has its original database values. <p>Note: User-defined items also have a value of "None" for this field.</p>
Material Price Updated	Date when this item's material unit cost was last modified. For new items, the date created.

Cost Fields

Unit cost and extended cost fields occupy the lower portion of the primary entry screen. The column headings are the Direct Cost columns defined on the Name Project Columns Screen.

- Unit costs are initially copied with the item from the Unit Price or other database, or entered by the user for user-defined items. The unit costs may be modified at any time.
- Extended costs are the unit costs multiplied times the value of the Quantity field.

Secondary Entry Screen Fields

Following are the fields on the secondary entry screen for cost items. This screen is used to apply foreman or apprentice labor rates, as described above. Its other uses are to reference a crew for the item (see Section 6.5) and to define the shipping weight (Section 6.8).

Field	Description
Item Type	<p>This unlabeled field identifies the source database for the item and type of rate used. Codes are:</p> <p>C - Crew. The item references a crew in the Crews Database for labor and equipment cost information.</p> <p>E - Equipment (Average). The item is copied directly from the Equipment Rates Database and the unit rate for average conditions is applied.</p> <p>S - Severe Equipment. The item is copied directly from the Equipment Rates Database and the unit rate for severe conditions is used.</p> <p>U - Unused/Standby. The item is copied directly from the Equipment Rates Database and the standby unit rate is used.</p> <p>L - Laborer. The item is copied directly from the Labor Rates Database and uses the laborer unit rate.</p> <p>A - Apprentice. The item is copied directly from the Labor Rates Database and the apprentice rate is used.</p> <p>F - Foreman. The item is copied directly from the Labor Rates Database and the foreman rate is used.</p> <p>Note: Foreman and apprentice rates are computed as adjustments to the laborer rate. These adjustments are defined on the Crews Database Edit Screen. See Section 9.4.</p>

Field	Description
ID	ID of the item in the referenced database. Blank for user-created items.
Hourly Output	The crew's estimated output per the unit of measure associated with the cost item.
Unit Weight	Weight per unit of measure for the cost item.
Unit Volume	Volume per unit of measure. Used to compute the Equivalent Shipping Weight for low-density items.
Equivalent Shipping Weight	Computed by the program. This is the weight the program uses to calculate the shipping cost of the item.

After Defining the Cost Item

When you have finished defining the cost item, you can:

- Add Notes to your description by choosing the Notes function (F7).
- Press the Page Down key to save the item and begin adding another cost item beneath the same title.
- Press the F10 key to save the item and exit to the browse mode screen.

Note: You can also exit at any time without saving the data by pressing the Esc key.

6.3 Using Lookup From the Project

Purpose

A chief advantage of GOLD is its ability to store detailed cost information in multiple databases and then to retrieve that information and place it quickly and easily into an estimate.

If you do not already know the database ID of an item you want to place in an estimate, you can use the Lookup feature to quickly search the relevant database and retrieve the item.

Use of Lookup in Other Databases

You can also use the Lookup feature starting from databases other than the Project Database. For example, when working in the Unit Price Database, you can look up into the Crews Database.

Refer to Chapter 16 for general instructions on using Lookup.

Retrieving Cost Data to the Project Database

You can use Lookup from detail-level or title-level entry screens, in add or edit mode.

From Detail-level Screens

From detail-level screens, you can look up and retrieve any of the following:

- Cost items from the Unit Price Database.
- Labor items from the Labor Rates Database.
- Equipment items from the Equipment Rates Database.

You can also add or replace a crew reference for a cost item by looking up into the Crews Database.

From Title-level Screens

From title-level screens, you can look up and retrieve:

- A crew composition from the Crews Database.
- An assembly from the Assemblies Database.

Note: Lookup options for the Models Database are covered in *Volume 2, Advanced Options*.

Looking Up in Add and Edit Modes

When you look up from the detail or title levels, the data you can bring back to the project depends on whether you start in add or edit mode.

Add Mode

- When you look up detail items in add mode, you can mark multiple items and bring them back as additions to the database.
- When you look up a title in add mode, you can only bring back a single title element (the title and all of its detail items).

Edit Mode

- When you look up detail items in edit mode, you can only retrieve a single detail item as a replacement for the item you are editing.
- When you look up a Crews Database title in edit mode, you can bring back that title's detail items (crew members) as additions to the detail items already in place under the title you are editing.

Note: You can look up an Assemblies Database title in edit mode and bring back its detail items only if the present project title has no subtitles under it.

First Screen Displayed By Lookup

When you look up into another database, the program uses a database ID field on the entry screen you start from to determine which screen to display first.

- When you look up from detail-level, the program uses the Database ID field on the primary cost item entry screen when looking into the Unit Price Database, and the ID field on the secondary entry screen when looking into the Crews, Labor, or Equipment Rates Database.
- When you look up from a title-level in the Crews Database, the program uses the Database ID field on the secondary entry screen.

Which screen is displayed in the database you look into depends on this ID field, as follows:

If the ID field...	Then GOLD displays...
has an ID that exactly matches the database ID of an item or title in the database	the detail or title list screen containing that item or title.
has no exact match in the database	the list screen of the closest item or title.
is empty	the Level 1 title list screen.

Note: The first time you look up into the Assemblies Database, the Level 1 title list screen is displayed. If you look up into the Assemblies Database again in the same session, the last screen shown will be redisplayed.

Procedure for Detail Items

Follow these instructions to look up detail-level items, beginning on a detail-level list screen in the Project Database.

1. Press the F4 key if you need to look up and replace an item. Press the F2 key if you need to look up and add one or more items.

2. Press the F6 key.

Result: The Lookup Menu is displayed.

3. Move the highlight to the database you need to look into, then press Enter.

Result: The program accesses the appropriate database and displays a list screen (see above.)

4. If the item you need is not already displayed, search through the database by selecting titles and pressing the Enter key until finding the item.

5. If you are looking up in add mode and you want to retrieve several items, do one of the following:
 - Press Shift+F9 to mark each item.
 - Select each item to be retrieved by entering a value in the Quantity field for the item on the detail-level list screen.
6. Press F6.

Result: The Lookup Menu is displayed with the highlight on the Confirm Lookup option.

7. Press Enter.

Result: The program returns to the Project Database and displays the retrieved item. If you were in add mode and retrieved multiple items, the entry screen for the last retrieved item is displayed.

Note: To exit Lookup without retrieving any items, press Shift+F10 or choose Abandon Lookup from the Lookup Menu.

Procedures for Titles

When you look up from a title level, you can retrieve an assembly or a crew as an assembly. All the detail items beneath the title that you retrieve are also brought back into the project. The procedures for looking up and retrieving titles are slightly different for the Crews and Assemblies Databases, and are explained later in this chapter..

- Refer to "Copying a Crew as an Assembly" in Section 6.6 for instructions on looking up a title in the Crews Database.
- See "Copying an Assembly Into the Project" in section 6.9 for instructions on looking up into the Assemblies Database.

6.4 Editing and Deleting

Description

After adding titles and cost items to a project, you will often need to go back and make changes. GOLD allows you to easily modify titles or cost items in the Project Database and to delete them.

Note: You can also use the procedures listed here to edit and delete items in the other databases.

Editing a Title or Detail Item

Follow these steps to edit a title or detail cost item. Begin on a title list screen or browse mode screen.

1. Highlight the item or title you need to edit and press the F4 key.

Result: The primary entry screen is displayed in edit mode.

2. Use the Tab key or Arrow keys to move from field to field. Change the fields as needed by typing in the new data.

Note: You can also use Ctrl+End to move quickly to the last field and Ctrl+Home to return to the first.

3. If you need to edit data on the secondary entry screen, display the screen by pressing Shift+F7. Change the data as needed, then press F10 to return to the primary screen.
4. When you are finished editing, press the F10 key to exit the screen and save the changed data.

Note: You can exit the screen without saving the changes by pressing the Esc key.

Effect of Deleting

When you delete a title or cost item, it is flagged with a DEL label, but remains displayed on the screen. Deleted titles are shown on list screens in light gray or low-intensity.

The deleted title or item remains stored in the database, but is not included in any calculations. To permanently remove titles or cost items from a database once they've been deleted, use the Pack a Database option on the Services Menu. See Section 24.7.

Deleting Titles

Deleting a title deletes all cost items beneath the title. Follow these steps:

1. Highlight the title on the title list screen and press the F4 key to access its entry screen in edit mode.
2. Press Ctrl+F4.
Result: The program displays a message asking you to confirm the deletion.
3. Enter Y to confirm and press Enter.

Deleting Detail Items

To delete a cost item, highlight it on the browse mode screen and press Ctrl+F4. You can also delete cost items from their entry screens.

To Cancel Deletion

Since deleted titles and cost items are not permanently removed from the database until the database is packed, you can cancel the deletion.

Simply access the title entry screen, or highlight the cost item on the browse mode screen, and press Ctrl+F4 again.

6.5 Working With Crews

About Crews

A *crew* is a grouping of cost items representing all the labor and equipment costs required to accomplish a specific kind of work.

Crews are stored in the Crews Database as titles at the lowest title level. The individual labor and equipment cost items within each crew are copied from the Labor and Equipment Rates Databases and stored as detail items below the crew title. These items are referred to as the *crew members*.

Using Crews in a Project

GOLD lets you use crews in a project in two ways:

- A crew can be referenced by a *cost item* to derive the labor and equipment costs of the item. You can then adjust the crew's hourly output figure to suit your estimate. This adjustment will automatically modify the labor and equipment costs of the item.

This method is described in this section.

- You can copy (or build) a crew as a *title* in the Project Database at the lowest title level. The labor and equipment items in the crew (that is, the crew members) then become individual cost items in the project. This option is referred to as treating crews as assemblies.

This method is discussed in Section 6.6.

Secondary Cost Item Entry Screen

For the first of these options, referencing crews at the cost item level, you use the secondary entry screen, which is shown in Figure 6.3.

Referencing a Crew Within a Cost Item

If you copy a Unit Price Database item that references a crew, the crew reference and crew hourly output for the item are automatically copied as well. You then have the option of changing the item to reference a different crew, or of adjusting the hourly output.

If you are creating your own cost item, you also have the option of referencing a crew within the item.

Note: If the Estimate Type is set to U (Unit Costs; No Crews) you can still assign a crew to a cost item, but the crew reference will be ignored in cost calculations. The reference is recorded in case you later decide to change the Estimate Type.

Follow these steps to add or change a crew reference within a cost item:

1. Access the secondary cost item entry screen from the primary screen by pressing Shift+F7.
2. If "Crew" is not already listed as the item type in the first field, then enter it there by pressing C and then the Enter key.
3. If you know the Crews Database ID of the crew you want to use, enter it in the ID field and press Enter.

If you do not know the ID, use the Lookup feature to find and copy the crew. (See Section 6.3 for details.)

4. Press the Tab key to move the cursor to the Hourly Output field and enter an output figure. (Refer to "Adjusting Crew Output" below for more information.) Press the Enter key.
5. Press the F10 key to exit and save the crew data.

Result: The primary entry screen for the item is displayed. The Labor, Equipment, and Manhours cost fields (if defined for this project) now show values based on the crew reference and hourly output.

Adjusting Crew Output

Regardless of whether the cost item is copied from the Unit Price Database or user-created, you can adjust the hourly output figure to fit your estimate.

Enter the output in the Hourly Output field on the secondary entry screen. Adjusting this figure will change the labor and equipment costs shown on the primary screen. It will also change the figure in the Manhours figure if this column type is used.

Example

A GOLD Project Database contains cost item MIL 03110 1613, copied from the Unit Price Database. This item references Crew ACARJ, with an hourly output figure set at approximately 42 square feet. The resulting unit costs shown on the primary entry screen are \$1.74 for labor and \$0.05 for equipment. A unit Manhours figure of 0.10 is also shown.

If you double the crew's hourly output to 84 square feet, this reduces the unit costs by half, since the crew is needed only half as much time to accomplish the same work. The unit costs are now shown as \$0.87 for labor and \$0.03 for equipment, and the Manhours is reduced to .05.

Note: This example assumes that the Crew Productivity value, set in the Crews Database, is equal to 1.00, which is most often the case. See Sections 11.1 and 11.3 for information on how the Crew Productivity is used in cost calculations.

Crew Costs in Tandem

As previously noted, in a cost item referencing a crew, the labor and equipment costs are tied together. Adjusting one cost automatically changes the other.

Therefore, you cannot independently adjust labor or equipment costs of crew-dependent items in the Project Database. If you need to adjust labor or equipment costs independently for these items, you can do so in the Labor or Equipment Rates Database. Refer to Sections 12.3 and 13.3 respectively.

Field Descriptions

Following are the fields on the secondary entry screen used to associate a crew with a cost item.

Field	Description
Item Type	<p>This is the first, unlabeled field to the left of the ID field. Select Crew as the value.</p> <p>Note: Other uses of this and the next field are explained in Section 6.2.</p>
ID	ID of the crew referenced in the Crews Database.
Hourly Output	<p>The crew's estimated hourly output per the unit of measure associated with the cost item.</p> <p>This figure is copied from the Hourly Output figure in the Unit Price Database if the cost item is copied from that database. For user-created items, you enter the output.</p> <p>In either case, you can adjust the output as needed.</p>

6.6 Working With Crews as Assemblies

About Crews as Assemblies

The second way you can use the Crews Database to help build an estimate is to copy an entire crew at the lowest title level. The crew then becomes a title in the Project Database, and the crew members become individual labor and equipment cost items below that title.

This method is called using crews as assemblies, since the procedures are much the same as those for using assemblies in the project. (See Section 6.9 for information.)

Redefining Crews in the Project

Once the crew is copied into the project, you can add or delete crew members. This allows you to define exactly the crew composition you need for any part of an estimate.

- You can add crew members by creating them yourself or by copying them from the Labor or Equipment Rates Database. See Section 6.2 for instructions.
- You can remove crew members through the Delete function (Ctrl+F4), which is explained in Section 6.4.

Secondary Project Title Entry Screen

To copy a crew as an assembly into the Project Database, you use the secondary entry screen for titles. This screen is shown in Figure 6.4.

Copying a Crew as an Assembly

Follow these instructions to add a crew as an assembly to your project. Begin on the title list screen at the title level where you need to place the crew. (This must be the lowest title level in this part of the project, since detail cost items are added directly below the crew title.)

1. Access the primary title entry screen in add mode by pressing the F2 key.
2. Enter an ID, name, quantity, and unit of measure for the title. (Refer to the Field Descriptions in Section 6.1 if necessary.) The name describes the task to be performed by the crew and the quantity indicates the amount of the work.

01_01. 1. Standard Foundations	
FUNCTION	
1 HELP	
2 ADD	
3 TITLES	
4 EDIT	
5 DETAIL	
6 LOOKUP	
7 NOTES	
8 SELECT	
9 MENU	
10 EXIT	

The 3000 Psi Concrete Grade Beam

Database/Activity ID : 6

Activity Cost : 1,787

Productivity : 0.000 FT /

Duration : 0.000

Number of Work Days/Shifts : 7 Days Shifts/Day C

Total Hours per Day : 15.00 OT Differential C

Overtime Percentage : 37.14%

Responsibility Code [SDEF] :

Work Area Code [SDEF] :

Bid Item No [SDEF] :

Mod/Claim No [SDEF] :

AL 33

1,069 24 693 0 1,787

ID from the Assemblies or Crews Database

NOTES
OTHER
EST A
PROJECT
v5.29

Figure 6.4: Secondary Title Entry Screen, Project Database

3. Optional. If you know the database ID or partial ID of the crew you want to use, you can enter it as follows. (This will specify which Crews Database screen will be displayed during lookup.)
 - Press the Shift+F7 keys to display the secondary entry screen.
 - Type the crew ID or partial ID in the Database ID field and press Enter.
4. Press the F6 key.

Result: The Lookup Menu is displayed.
5. Move the highlight to the Crews Database, then press Enter.

Result: The program accesses the Crews Database and displays a title list screen.
6. If the crew title you want is not already displayed, search through the database by selecting titles and pressing the Enter key until finding the crew. Then highlight the crew title on the title list screen.
7. Press F6.

Result: The Lookup Menu is displayed with the highlight on the Confirm Lookup option.

8. Press Enter.

Result: The program returns to the Project Database and displays the primary or secondary title entry screen, whichever was last displayed.

Note: To exit Lookup without retrieving any data, press Shift+F10 or choose Abandon Lookup from the Lookup Menu.

9. If the secondary entry screen is not displayed, press Shift+F7 from the primary entry screen to display it.

10. Move the cursor to the Productivity field. Enter your estimate of the crew's productivity, per the unit of measure, per hour. Then press the Enter key.

Result: The program computes and displays a value in the Duration field. (See the Field Descriptions below.)

Note: If you need to specify an overtime differential to be applied to the crew, you can use the next set of fields on the screen to do so. Refer to Section 6.7 for instructions.

11. Press F10.

Result: The primary entry screen is displayed. The computed costs for all items (crew members) below the title are shown in the cost fields.

12. Press F10 again to exit and save the data.

Result: The title list screen is redisplayed, with the new title and its costs shown.

Field Descriptions

Following are the fields on the secondary title entry screen that are used when copying a crew as an assembly.

Note: The remaining fields on the screen are used for calculating overtime adjustments. The overtime fields are discussed in Section 6.7.

Field	Description
Database/Activity ID	These are actually two adjacent fields: <ul style="list-style-type: none">• The <i>Database ID</i> is the database ID of the crew or assembly copied from the Crews or the Assemblies Database.• The <i>Activity ID</i> is a number to the right of the Database ID, used to identify the activity represented by this title. This ID is filled in by the program and cannot be changed.
Activity Cost	Once the title element has been recalculated (Shift+F2 keys), this field shows the computed total cost to the owner of the project of the activity represented by this title. Note: This cost includes all Indirect Cost markups, including those of the prime contractor. This cost differs from the Total Cost shown on the primary title entry screen, which shows the cost to the prime contractor and which includes only markups for any subcontractors.
Productivity	Amount of work the crew will perform, per the unit of measure, per hour. Example: 500 CY/HR
Duration	Amount of time the crew will need to accomplish the activity defined by the title. The program computes this value as the quantity (entered on the primary screen) divided by the productivity.

Example

The following example illustrates the use of a crew as an assembly:

1. An excavation activity within a project is defined at the lowest title level.
2. A quantity of 100,000 cubic yards is entered in the Quantity field on the title entry screen.
3. The Lookup function is used to copy Crew CODEF from the Crews Database for the purpose of estimating this task.
4. A productivity figure of 250 CY/HR is entered on the secondary title entry screen.
5. The program computes a task duration of 400 crew hours by dividing the quantity by the productivity.

Note: The duration figure is used in cost computations, as explained below.

Member Quantity

When a cost item is defined as a member of a crew in the Crews Database, it is given a *member quantity*. This quantity expresses the number of this type of member in the crew. Alternately, it can be viewed as the amount of the member's unit cost that is charged to the crew.

Example: Crew CODEF contains two full-time laborers. They are grouped together as a single cost item in the crew with a member quantity of 2. The crew also contains a foreman who spends one quarter of his time supervising this crew. His member quantity is defined as .25.

Note: See Section 11.1 for more information on how crews are defined.

When a crew member is copied as a cost item into the project, the member quantity becomes part of the cost calculation for the item, as explained below.

How Costs Are Calculated

When you work with a crew as an assembly, the labor or equipment cost of each item is calculated as follows:

1. The member quantity copied from the Crews Database is multiplied by the duration figure defined at the title level. The result is the number of hours this crew member is used for the task. This value is placed in the Quantity field on the cost item entry screen.
2. This quantity value is then multiplied by the unit (per hour) labor or equipment rate defined for the item to produce the item's labor or equipment cost for the task.

Example: To extend the above example, using the foreman:

Member Quantity = .25; and Duration = 400 hrs.

Cost Item Quantity = .25 X 400 = 100 hrs.

Item Labor Cost = 100 hrs. X 6.70 (hourly rate) = \$670.

Adjusting Linked Values

As illustrated above, when you work with a crew as an assembly, the costs of individual items are *linked* to the duration figure established at the title level.

You can adjust the costs of these items by adjusting the values within this link.

- You can change the duration by changing either the quantity or the productivity stored at the title level.
- You can also change the member quantity figure copied from the Crews Database. For example, your situation might dictate that you change the foreman's quantity from .25 to .5 hours per crew hour.

Link Quantity Window

To change the member quantity, you use the Link Quantity function (Ctrl+F7). This function accesses the Link Quantity Window, as shown in Figure 6.5.

Figure 6.5: Link Quantity Window for Crew Member

Using the Window

Follow these steps to use the Link Quantity Window to change a crew member quantity:

1. Access the cost item entry screen in edit mode.
2. Press Ctrl+F7, or choose the Link Quantity option on the Compute Menu.

Result: The Link Quantity Window is displayed.

3. Press the Tab key until the cursor is positioned in the Local Value field. This field shows the member quantity as currently defined.
4. Type the new member quantity, then press the Enter key.

Result: The linked values are recomputed.

5. Press F10 to exit the window and save the change.

Result: The entry screen is redisplayed with the new value in the Quantity field. The costs shown in the costs fields now reflect the new quantity.

Field Descriptions

The following table describes the fields on the Link Quantity Window as they are used for linking crew member quantities and computing costs.

Note: Additional fields and field values on this window are used with Assemblies (Section 6.9) and with the Models Module, which is described in Volume 2.

Field	Description
Reference Type	Type of reference used to generate the link. Correct value is Assembly Duration, as filled in by the program..
Reference Value	The value of the Duration field on the secondary title entry screen. Entered here by the program.
Operator	Operation performed on the reference value and local value to generate the quantity result. Correct entry is * Multiply by.
Local Value	The crew member quantity. The value is copied from the Crews Database, but can be adjusted here.
Quantity Result	Result of the computation. The program places this value in the Quantity field on the cost item entry screen.

6.7 Adjusting for Overtime

Description

GOLD lets you compute overtime as a percentage and assign it to a title in the project. This overtime percentage is then applied to the labor and equipment costs for all items grouped below the title.

Depends on the Estimate Type

The use of the Overtime Adjustment feature depends on which Estimate Type you have selected on the Name Project Columns Screen.

- For Estimate Types A and C, the overtime adjustments are computed and applied whenever you recalculate the project (Shift+F2) function or generate reports.
- For Estimate Type K, the overtime adjustments are calculated and applied only when you reprice labor and equipment, using either the Reprice L&E function (Ctrl+F2) or the Reprice Labor and Equipment option on the Prepare Menu.
- For Estimate Type U, the Overtime Adjustment feature is not used.

Where to Adjust

You define overtime adjustments at the lowest title level in the project. This is defined as any title that has detail items but no subtitles below it.

Procedure

You adjust for overtime using the secondary title entry screen (Figure 6.4). You can include overtime information when you first add the title, or you can access the entry screen in edit mode to add overtime data for an existing title.

Follow these instructions:

1. Press Shift+F7 from the primary title entry screen to display the secondary screen.
2. Enter data in the fields as required to define the overtime percentage. Refer to the Field Descriptions below. You can press F8 to see a list of values for multiple-choice fields.
3. When you are finished entering the data and the program has computed a value for the Overtime Percentage field, press F10 to save your data and return to the primary entry screen.

4. Press F10 again to exit the screen.

Result: The program applies the overtime markup to all labor costs below this title. The equipment costs (for equipment whose costs come from the equipment database) will be affected by the following formula: the Facilities Capital Cost of Money field is multiplied by $40 / (\text{total hours per day} * \text{number of work days})$.

Field Descriptions

Following are the fields on the secondary title entry screen used to figure overtime adjustments. You make entries in the indicated fields and the program then computes the Overtime Percentage value.

Field	Description
Number of Work Days/Shifts	Number of workdays per week for the project task defined by this title. Valid values are 5, 6, and 7.
Shifts/Day	Number of shifts per day. Values are: A - 1 shift, 8 hours. B - 2 shifts, 8 and 7.5 hours C - 2 shifts, both 7.5 hours D - 3 shifts, all 7.5 hours
Total Hours per Day	Total number of hours per day. The program fills in this value based on the Shifts/Day field, but allows you to enter a different value as an override.
OT Differential	Indicates the overtime differential and which days it is applied. Values are: A - Pay time-and-1/2, Monday through Saturday, double-time on Sunday B - Pay time-and-1/2, Monday through Friday, double-time on Saturday and Sunday C - Pay double-time all days.
Overtime Percentage	Computed by the program. The total labor markup percentage for the overtime situation defined.

6.8 Working With Shipping Costs

Description

If you are estimating for construction overseas or at a remote location, you may want to include shipping costs in the estimate.

GOLD lets you compute equivalent shipping weights for materials at the cost item level in the Project or Unit Price Database. In the Project Database, the program automatically calculates shipping costs at the detail and title levels, based on the shipping rates you enter.

Task List

Working with shipping costs involves three tasks:

1. You define Shipping as a Direct Cost column on the Name Project Columns Screen. This column is then used to display the shipping costs on screens and list them in reports.
2. For each cost item that includes material to be shipped, you enter shipping weight data.
3. You set the shipping rates to be applied.

Task 1 is explained in Section 5.4. Tasks 2 and 3 are discussed in the following paragraphs.

Task 2: Defining Shipping Weights

When a cost item is copied from the Unit Price Database into the project, its shipping weight data is automatically copied as well.

For a cost item that you create in the Project Database, you can enter weight and volume information and the program will compute the equivalent shipping weight, which is used to determine the shipping cost. (See the Field Descriptions below.)

Secondary Entry Screen

To compute the equivalent shipping weight, you use the secondary entry screen for cost items (Figure 6.3 on page 6-13). You access this screen from the primary entry screen by pressing Shift+F7.

The relevant fields are as follows:

Field	Description
Unit Weight	<p>Weight per unit of measure for the cost item. When adding an item, you enter both the weight and the unit of measure.</p> <p>Refer to Appendix B for valid units of measure.</p>
Unit Volume	<p>Volume per unit of measure. Used to compute the equivalent shipping weight for low-density items, as explained below.</p> <p>When adding an item, you enter both the volume and unit of measure.</p> <p>Refer to Appendix B for valid units of measure.</p>

Field	Description
Equivalent Shipping Weight	<p>Computed by the program. This is the weight the program uses to calculate the shipping cost of the item.</p> <p>If the item weighs less than 56 lbs./cubic foot, the program computes the equivalent shipping weight for cost purposes by multiplying the unit volume times the standard density of 56 lbs./cf.</p> <p>Otherwise, the program sets the Equivalent Shipping Weight field equal to the actual unit weight entered above.</p> <p>This field is computed in kilograms regardless of the unit of measure used to enter the unit weight and unit volume.</p> <p>Note: In the Project Database, only the equivalent shipping weight is saved. The next time you view or edit the item, the Unit Weight field will show the same value as the Equivalent Shipping Weight field and the Unit Volume field will be blank. If you want to store all the field values, you can define and store the item in the Unit Price Database and then copy it into the project. See Section 10.4 for Unit Price Database field descriptions.</p>

Task 3: Setting Shipping Rates

Normally, you define one or more shipping rates for the entire project and assign them at the level of the Project Information Record.

However, the program also allows you to define shipping rates at the Owner Cost Level (specified on the Set Breakdown Structure Screen) or at the lowest title level in the project. Rates set at a lower level override those set at a higher level for the same item or title.

You enter shipping rates as a cost per metric ton. The program computes each item's weight in metric tons using the Equivalent Shipping Weight value discussed above.

Adjust Pricing Screen

You set shipping rates in the Shipping column on the Adjust Pricing Screen (Figure 6.6).

Note: This screen can also be used to apply cost adjustments to the other Direct Cost columns defined for the project. Refer to Section 19.5.

Figure 6.6: Adjust Pricing Screen

Accessing the Screen

To access the screen, begin at the title list screen for the title level where you want to apply the shipping rates.

1. Highlight the appropriate title and press F4 to display that title's entry screen in edit mode.
2. Press Alt+F3, or choose the Adjust Pricing option from the Compute Menu.

Result: The Adjust Pricing Screen is displayed.

Parts of the Screen

The Unit Price Identifier column, the leftmost column on the screen, is divided into two parts:

- The first part can be used to enter a partial Unit Price Database ID of up to five characters. This partial ID identifies the cost items that the shipping rates apply to.
- The second part of the column can be used to enter a short description of the item category.

The remaining columns are labeled with the Direct Costs defined for the project.

Applying a Single Rate

If you want to apply a single shipping rate to all items below the current title, enter that rate in the Shipping column and leave the rest of the screen blank.

You can use this method at the Project Information Record to set a single rate for the entire project.

Setting Rates by CSI Division

If you want to set shipping rates by category, you can use the CSI Divisions, which correspond to the Level 1 titles in the Unit Price Database.

For each category, enter the two-character CSI Division ID in the Unit Price Identifier column. On the same row, enter the shipping rate to be applied to all items whose database IDs fall within that CSI Division. (See the Example below.)

Note: You can also create a "Default" row to define a rate for any items not covered by your other entries. This would include any user-created items whose database IDs do not fall within a CSI Division. The default row must be the top row on the screen and must have a blank Unit Price Identifier column.

Making Finer Adjustments

Sometimes, you may want to make finer distinctions than the CSI Divisions allow. You can define rows on the screen to break down the CSI Divisions to lower title levels, or to the level of an individual cost item.

Note: Be sure to add rows directly beneath the higher level title to which they apply. See the Caution below.

To add a row between two existing rows, press Shift+Insert. You can also press Shift+Del to remove unneeded rows.

Example of Use

You might define a row for CSI Division 05, Metals, and then enter a rate of \$120 in the Shipping column on that row. This would affect all cost items below the current title that have a database ID beginning with 05 and have a value recorded in the Equivalent Shipping Weight field.

For each of these items, the program would multiply the equivalent shipping weight by the rate of \$120 to compute the unit shipping cost for the item. The unit shipping cost would then be multiplied by the item quantity to yield the total shipping cost for the item. Both of these cost values would be displayed in the Shipping cost column on the item's entry screen.

Caution on Adding Rows

When performing price adjustments or adding shipping costs, the program searches the leftmost column of the Adjust Pricing Screen for an ID that matches the current item in the Project Database. The program begins this search from the bottom of the screen. As soon as it finds a match for an item, it uses that row and does not work on that item further.

Therefore, when you add rows on the Adjust Pricing Screen, be sure to place the rows in descending numerical sequence beneath the CSI Division to which they apply.

Correct:	03	Incorrect:	03
	031		03110
	03110		031

If the rows were set up as in the incorrect example above, the program, searching from the bottom up, would first encounter row 031. This would be read as a match for cost item 03110 1111, so the program would apply that row's shipping rate. It would then not use the next row, which contains the shipping rate actually intended for the specific cost item.

6.9 Working With Assemblies

About Assemblies

An *assembly* is a collection of cost items that represents all the costs required to create a larger piece of a project.

In the Assemblies Database, assemblies are stored as titles at the lowest title level, with the associated cost items stored below the title. The quantities and costs of these items are based on one unit of the assembly; for example, one square foot of partition.

Assemblies in the Project

When you copy an assembly into the Project Database, you add the assembly as a title at the lowest title level. The cost items in the assembly are automatically copied in as detail items below the assembly title.

At the title level, you then enter the quantity appropriate to your project, such as 10,000 square feet. The program multiplies this quantity value by the quantity of each of the detail items in the assembly to generate each item's quantity and total costs. These costs are then added to yield the total costs of the assembly.

Secondary Project Title Entry Screen

To copy an assembly into the Project Database, you use the secondary entry screen for titles. This screen is shown in Figure 6.4 in Section 6.6.

Copying an Assembly into the Project

Use the following procedure to add an assembly to the project. Begin on the title list screen at the title level where you need to place the assembly. This must be the lowest title level in this part of the project.

1. Access the primary title entry screen in add mode by pressing the F2 key.
2. Enter an ID for the new title and press the Enter key.
3. Press the F6 key.

Result: The Lookup Menu is displayed.

4. Move the highlight to the Assemblies Database option, then press Enter.

Result: The program accesses the Assemblies Database and displays the Level 1 title list screen.

Note: If you have previously looked up into the Assemblies Database in this session, then the last screen shown is displayed.

5. Search through the database by selecting titles and pressing the Enter key until finding the title you need. Highlight the title on the list screen.

Note: You can also search using the Find Keyword (Alt+F7) function. See Section 17.3 for instruction.

6. Press F6.

Result: The Lookup Menu is displayed with the Confirm Lookup option highlighted.

7. Press Enter.

Result: GOLD returns to the Project Database and copies back the assembly title and its detail items. The title entry screen is displayed. The assembly's name and unit of measure are filled in on the screen, with a default quantity of one. The computed costs of the detail items in the assembly are shown in the cost fields.

Note: To exit Lookup without retrieving any data, press Shift+F10 or choose Abandon Lookup from the Lookup Menu.

8. If you want to change the assembly's name to one specific to your project, enter a new name in the Name field.
9. Enter the appropriate quantity value for your project in the Quantity field.

Result: The cost fields are recalculated based on the entered quantity.

10. Press F10 to exit and save the data.

Adjusting Linked Values

As explained above, the costs of individual items in the assembly are *linked* to the entry in the Quantity field on the title entry screen.

You can adjust the quantities and thereby the costs of these items by adjusting the linked values.

- You can change the quantity figure for the title at any time and this will automatically adjust the quantities of the detail items.
- You can also change the item quantity figure copied from the Assemblies Database.

Example: A partition assembly might be defined to include 2 square feet of drywall (both sides) for every square foot of partition. The item quantity for the drywall item would be defined as 2. If your estimate called for single-side construction instead, you would change the item quantity to 1.

Link Quantity Window

To change the item quantity, you use the Link Quantity function (Ctrl+F7). This function accesses the Link Quantity Window, as shown in Figure 6.7.

FUNCTION

1 HELP

2 ADD

3 TITLES

4 EDIT

5 DETAIL

6 LOOKUP

7 NOTES

8 SELECT

9 MENU

10 EXIT

001-09/2.1.1. LIGHTING FIXTURES INSTALLED

Project Seq/Database ID : 20 JSR 16

Description : Fixture 501b 70 Watt High

Quantity : 250.0000 EA

Reference Type : P - Parent quantity

Reference ID : 5

Reference Value : 500.0000 EA

Operator : * Multiply by

Local Value : 0.5000

Quantity Result : 250.0000

Ma

MATERIAL

53.59

13,398

6,440

0

438

0

20,275

= TOTAL

81.10

Type of source for the Reference Value. <F8> to see choices.

OTHER

EST U PROJECT

v5.20F

Figure 6.7: Link Quantity Window for Assembly Item

Note on Modeling

The capabilities of the Link Quantity function are greatly expanded through the GOLD Models Module. With the modeling software, you can not only adjust quantities, but can also define different links using a wide range of available references and parameters.

Refer to *Volume 2, Advanced Options* for more on the Modules Module.

Using the Window

Follow these steps to use the Link Quantity Window to change an assembly item's quantity:

- 1. Access the cost item entry screen in edit mode.

2. Press Ctrl+F7, or choose the Link Quantity option on the Compute Menu.
Result: The Link Quantity Window is displayed.
3. Press the Tab key until the cursor is positioned in the Local Value field. This field shows the currently-defined quantity per unit of assembly for the item. (This value multiplied by the assembly quantity equals the item quantity.)
4. Type the new value, then press the Enter key.
Result: The quantity relationship is recomputed.
5. Press F10 to exit the window and save the change.
Result: The entry screen is redisplayed with the new result in the Quantity field.
6. Press F10 again to exit.

Field Descriptions

The following table describes the fields on the Link Quantity Window as they are used for linking assembly item quantities and computing costs.

Field	Description
Reference Type	Type of reference used to generate the link. Correct value is Parent Quantity.
Reference Value	The value of the Quantity field on the assembly title (that is, "parent") entry screen.
Operator	Operation performed on the reference value and local value to generate the quantity result. Correct entry is * Multiply by or / Divide by.
Local Value	The quantity of the item per unit of the assembly. The value is copied from the Assemblies Database, but can be adjusted here as needed.
Quantity Result	Result of the computation. The program places this value in the Quantity field on the cost item entry screen.

6.10 Using Modifiers in the Project

Definition

A *modifier* is an adjustment record that can be applied to a detail cost item. Modifiers allow you to change the labor, material, and/or shipping costs of items by adding or deducting optional quality or scope.

Example: The Unit Price Database supplied with GOLD contains a series of cost items for drywall construction. A range of modifiers is available for these items. These modifiers represent options such as waterproof drywall, fire-resistant drywall, and so on.

Note: Refer to Section 10.5 for instructions on working with modifiers in the Unit Price Database.

Options in the Project

If you have cost items in your project that were originally copied from the Unit Price Database (items with UPB IDs), you can look up and copy modifiers for those items from the library of modifiers stored with the UPB. You can then make changes to the modifiers you've copied, if needed.

You can also create and apply modifiers that are specific to items in the project.

Item Modifier Screen

You use the Item Modifier Screen (Figure 6.8) to apply modifiers to cost items in the Project Database.

- The top row of this screen shows the cost item's UPB ID and Description. It also shows the base labor and material unit costs and the unit weight in kilograms.
- Subsequent rows show any modifiers currently applied to the item, and the associated cost and/or weight adjustments. Adjustments may be applied as either an amount or a percentage.
- The bottom row shows the unit costs and weight resulting from the modifications. These are the values that are actually used in the estimate.

Figure 6.8: Item Modifier Screen

Accessing the Screen

To access the Item Modifier Screen for a project cost item, first display the item's entry screen in edit mode. Then press Alt+O (Add Modifier) or Ctrl+O (Edit Modifier).

Note: These two functions work exactly the same in the Project Database, except in how they initially display the Item Modifier Screen if the item already has modifiers defined for it.

- Alt+O (Add Modifier) places the cursor on the first blank line, and displays a listing of the modifiers in the UPB Library that are available for this item.
- Ctrl+O (Edit Modifier) places the cursor on the first line of the screen, which shows the base cost information for the item. You can change the base information as well as editing or adding modifications on the following lines.

Using Multiple Modifiers

You can apply more than one modifier to an item in the project, to make multiple cost adjustments.

When you enter multiple modifiers, GOLD computes the modifications in the following order:

1. Percentage adjustments are first totaled together and then applied to the base unit values.
2. Amount adjustments are then totaled and applied.

Adding a Modifier to an Item

Follow these steps to add a modifier to a cost item in the Project Database.

1. Display the entry screen for the item in edit mode.
2. Press Alt+O or select the Add Modifier function from the Compute Menu.

Result: The Item Modifier Screen is displayed. The modifiers in the UPB Library that are available for this item are displayed in a separate window.

Note: If no modifiers are available, you can either add a new modifier to the UPB Library (see Section 10.5) or create the modifier on this screen, as described in Step 4 below.

3. If you want to use a modifier from the library, highlight the modifier you want, then press Enter.

Result: The modifier is placed on the Item Modifier Screen. GOLD computes the applicable adjustments and places the results on the bottom row of the screen.

Note: Once you've copied a modifier from the library, you can change the modifier in the project without affecting its original in the library. See "Editing Modifiers in the Project," below.

4. To create your own modifier, do the following:
 - Press Esc to dismiss the library listing (if necessary).
 - Enter a description of the modifier and press the Tab key.
 - Type the adjustments for the modifier as applicable, pressing the Tab key to move from field to field..

Result: GOLD computes the adjustments and displays the results on the bottom row of the screen.

5. Press F10 to exit the Item Modifier Screen.

Result: The entry screen is redisplayed. The modifications for the item are reflected in the appropriate fields.

Editing Modifiers in the Project

After you have applied one or more modifiers to an item, you can change the modifiers as needed. You can enter new adjustment values for labor, material, and weight, and you can also change the adjustment methods from percentage to amount or amount to percentage.

Changes made to modifiers in the Project Database do not effect the original modifiers stored in the UPB Library.

1. Beginning on the cost item entry screen, press Ctrl+O or select Edit Modifier from the Compute Menu.

Result: The Item Modifier Screen for the selected item is displayed.

2. Enter the changes to the modifier(s) as needed.

Result: GOLD recomputes the item's costs and displays the results at the bottom of the screen.

3. After making the changes, press F10 to exit and save.

Deleting Modifiers in the Project

When working on the Item Modifier Screen in the Project Database, you can delete an existing modifier. First position the cursor on the row for the modifier to be deleted, then press Ctrl+D.

Result: GOLD prompts you to confirm the deletion.

Enter Y to confirm or N to deny.

6.11 Working With Alternate Costs

Purpose

In some projects, you may want to estimate and compare the costs for different alternatives. By using the methods described in this section, you can separate and view alternate costs on screens and reports.

Defining the Project Structure

To build alternate costs into an estimate, define a separate Level 1 title for each alternate situation. This allows you to separate the alternate costs at a high level and to see cost comparisons on the Level 1 title list screen and on project summary reports.

Examples:

- In some estimates, you might have a Base Bid represented by one or more Level 1 titles, plus several alternates. Each alternate would be created as a separate Level 1 title, with IDs higher than the Base Bid titles. The alternates can be additive or deductive; that is, adding costs to or deducting costs from the Base Bid.
- In estimating a building project, you might have alternate possibilities of using brick or stone. You could define a Level 1 title called Brick Construction and a second called Stone Construction. You would then place all the costs relevant to the brick option under the first title and those for stone under the second.

Procedure

Use the following procedure to define and view alternate costs in an estimate:

1. Create separate Level 1 titles for each alternate, with the alternates using the highest title ID numbers.
2. Add the subtitles and/or detail cost items for each alternate.

Note: You can, if you choose, define the first Level 1 title element (title plus subtitles and detail) and then use the Copy function (Shift+F4) to copy it one or more times. You can then edit the elements for each alternate, changing only the data that differs in each case. See Section 18.4 for instructions on using the Copy function.

3. Go to the Special Formatting Options Window by pressing shift+F7 from the Other Report Formatting screen under the Reports menu. Fill in the First Alternate ID. This is the number which is the first level 1 title ID to be treated as an alternate. Any level 1 title with this ID or higher will not be included in the project total on level 1 project summary reports. Alternates are also not included in the Project Information Record on screen.
4. After defining the alternate elements, position the highlight on the Project Information Record on the Level 1 title list screen. Then press Shift+F2 (Recalculate).

Result: The project is recalculated. The total costs for each element are shown on the title list screen.

5. To produce a report of the alternate costs, do the following:
 - On the Select Reports to Print Screen, choose project summary reports at Level 1.
 - Run the selected reports.

Note: See Chapter 23 for complete instructions on generating reports.

Using 2nd View

The 2nd View capability provides an additional method of comparing costs. With 2nd View, you can list alternates in separate Project Databases and produce reports showing the comparisons.

See Chapter 8 in Volume 2 for more information on 2nd View.

CHAPTER 7

WORKING WITH INDIRECT AND OWNER COSTS

Chapter Overview

Chapter 7 explains how to add Project Indirect and Owner Costs to an estimate.

GOLD offers great flexibility in how these costs can be applied to a project. The software automatically calculates the costs according to any of a number of methods that you choose.

This chapter contains the following sections:

- 7.1 Types of Indirect Costs
- 7.2 Contractor Tiering
- 7.3 Defining Contractors - Primary Entry Screen
- 7.4 Defining Contractors - Secondary Entry Screen
- 7.5 Applying Contractors to Costs
- 7.6 Working With Owner Costs
- 7.7 Working With Contingency Notes

7.1 Types of Indirect Costs

About Indirect Costs

Indirect Costs are costs that you choose to distribute over an entire project or some portion of a project. They can include contractors' overhead, profit, and bond as well as other distributed costs.

GOLD places these costs in the Indirect Cost columns that you set up on the Name Project Columns Screen.

Contractors' Costs

Contractors' overhead, profit, and bond costs are figured individually for each contractor involved in the project.

Three tasks are involved in working with contractors in your project:

1. You set up the Indirect Cost columns, as discussed in Section 5.4.
2. You define each contractor as a title stored beneath the Project Information Record. If there are subcontractors involved, you define the contractor titles in a hierarchy, which represents the tiering of the subcontractors (who works for whom). As you define each contractor, you also select the method that the program will use to figure the associated Indirect Costs.

See Sections 7.2 through 7.4.

3. You assign contractors to titles or individual cost items in the project to prorate their costs over the relevant project elements. This is explained in Section 7.5.

7.2 Contractor Tiering

Prime and Subcontractors

In GOLD, a *prime contractor* is defined as one who does not work for another contractor. A *subcontractor* is one who does work for another contractor.

GOLD allows you to have more than one prime contractor defined in the project. GOLD also permits you to define multiple levels of subcontractors, as in the following example:

Example:

Level 1 - Project Information Record
Level 2 - BC Building Construction (Prime Contractor)
Level 3 - EL Electrical (Subcontractor)
Level 4 - ES Electrical Specialties (Subcontractor)

In this example, Contractor ES works for Contractor EL, who in turn works for Contractor BC. BC is a prime contractor, because he does not work for any other contractor. BC is also considered the *parent contractor* to his subcontractor EL. Similarly, EL is considered the parent contractor to his sub, ES.

Compounded Cost Markups

When GOLD recalculates the project or runs reports, a subcontractor's cost markups are rolled in to the costs applied to the parent contractor.

In the above example, the costs for work performed by ES will be applied to EL with ES's markups included. Similarly, the costs for the same work will be applied to BC with both ES's and EL's markups included.

In other words, GOLD compounds the markups of tiered contractors, as is common construction practice.

How Tiering Is Defined

In GOLD, the relationship of tiered contractors (who works for whom) is defined by the way you enter the contractor records.

- Prime contractors are always entered as titles at Level 2 beneath the Project Information Record.
- Subcontractors are always entered as subtitles beneath the title of their parent contractor.

Note: You can define up to four levels of tiered contractors. This assumes that there are six title levels defined for the project on the Set Breakdown Structure Screen. In general, the number of contractor levels allowed for a project equals the number of defined title levels minus two.

Refer to the next section for instructions on defining contractors.

Viewing Tiered Relationships

Because subcontractors are entered as subtitles to their parent contractors, you can view the tiered relationships of contractors by displaying the title list screen at the lowest level where subcontractors are entered. Figure 7.1 shows an example.

The tiered relationship is also shown on Contractor Summary Reports.

Figure 7.1: Tiered Contractors on Title List Screen

7.3 Defining Contractors - Primary Entry Screen

Project Information Record

You define contractors under the Project Information Record. This record is automatically created as a title when you first create the project. It is always listed as the first title on the Level 1 title list screen.

Two Screens

You define a contractor by accessing and filling out the Contractor Entry Screen, which is illustrated in Figure 7.2. In some cases, you also use a secondary entry screen, which is illustrated and discussed in the next section.

Figure 7.2: Contractor Entry Screen

Accessing the Primary Entry Screen

How you access the Contractor Primary Entry Screen depends on where you are adding the contractor and whether contractors are already defined at that level.

- To add a prime contractor (at Level 2), highlight the Project Information Record on the title list screen and press Shift+F3 (Add Subtitle).

After the first prime contractor is defined, you can define additional prime contractors by simply highlighting the title of an existing prime contractor and pressing the F2 (Add) key.

- To add a subcontractor, highlight the title for the subcontractor's parent contractor and press Shift+F3 (Add Subtitle).

Once a subcontractor is defined for any parent, you can define additional subcontractors at the same level by highlighting an existing subcontractor title and pressing the F2 (Add) key.

Completing the Screens

Follow these steps to add a contractor once the primary entry screen is displayed.

1. Complete the fields on the primary screen by typing in the data and pressing the Enter key. Refer to the Field Descriptions and "Cost Fields" below for information.
2. While filling in the screen, you may need to access the secondary entry screen.
 - Press Shift+F7 to display the screen.
 - Enter the necessary information.
 - When finished, press F10 to return to the primary screen.

Refer to the next section for details on the secondary entry screen.

3. When you have finished filling in the screens, press the F10 key to save and exit.

Note: You can exit without saving at any time by pressing Esc.

Field Descriptions

This table describes the fields on the upper part of the primary Contractor Entry Screen.

Field	Description
Level ID	<p>Portion of the contractor title's database ID defined at the current level. (The full database ID consists of this entry plus the IDs of any higher-level titles-representing parent contractors-under which this contractor is placed.)</p> <p>Note: You might typically make the same entry in this and the next field. Since the Level ID is used to sort contractors on list screens and reports, this will result in the contractors being sorted by their contractor IDs.</p>
Contractor ID	<p>Two-character code you assign to identify this contractor. You enter this code in the Contractor ID field on project titles and cost items to assign the associated costs to this contractor.</p> <p>Refer to "Suggested Contractor IDs" below for a list of recommended codes.</p>
Contractor Name	<p>Name of the contractor. You can add additional description or notes through the F7 Notes feature.</p>
Contractor Quantity	<p>Used in conjunction with the Unit of Measure field. This is the quantity of work assigned to this contractor.</p> <p>This field allows the program to calculate a unit cost for all work done by this contractor independent of the unit costs at any particular level.</p>
Unit of Measure	<p>This unlabeled field indicates the unit applied to the quantity.</p> <p>See Appendix B for valid units of measure.</p>

Field	Description
Contractor Cost	Total of Direct Costs to this contractor. The program computes this amount based on all cost items assigned to this contractor throughout the project. Note: This field is set to zero until costs are assigned to the contractor and the project is then recalculated.

Suggested Contractor IDs

Following is a list of recommended contractor IDs for common types of contractors:

AA - Prime Contractor	MR - Membrane Roofing
AB - Alternate Prime	PA - Partitions
AC - Acoustic Treatment	PC - Precast Concrete
CA - Carpeting	PL - Plumbing
CO - CO2 Fire Protection System	PR - Preform Roofing, Siding
CS - Special Coating	PS - Painting and Sealants
CW - Cabinet and Casework	RF - Resilient Flooring
EL - Electrical	SC - Ceiling Suspension Systems
ES - Special Electrical Systems	SD - Special Doors
EV - Elevators	SF - Special Flooring
FP - Fire Protection	SM - Sheetmetal
FS - Food Service Equipment	SR - Shingles, Roofing Tiles
FU - Furnishings	SS - Structural Steel
GL - Glass and Glazing	ST - Soil Treatment
GW - Gypsum Wallboard	SW - Sitework
HA - Halon Fire Protection System	TB - Test and Balance
HC - Hoist and Cranes	TE - Terrazzo
HV - HVAC	TF - Pile, Foundations
IN - Insulation	TI - Tileproof, Waterproof
LP - Lath, Plaster, Stucco	WC - Wall Covering
MA - Masonry	WD - Windows
MB - Prefab Metal Buildings	WF - Wood Flooring
MC - Controls	WP - Dampproof, Waterproof
ME - Mechanical	WW - Entrances, Windowwalls
MI - Instrumentation	

Cost Fields

Cost fields occupy the lower portion of the screen. They are repeated under each heading. The column headings are the Indirect Cost columns defined on the Name Project Columns Screen.

Field	Description
Cost Method	<p>This unlabeled, 1-character field indicates the method of applying Indirect Costs. Which of the following methods are available depends on the cost column type.</p> <p>Note: You can press F8 to view the cost methods. Unavailable options for a column type are shaded in the listing.</p> <p>P - Calculate the cost based on the percentage you enter below times the running total. (The running total is the total of the contractor's Direct Costs plus the values of any columns appearing to the left of the present column.) This option is available for all column types.</p> <p>D - Calculate the cost using the percentage you enter below times the contractor's Direct Costs only. This option is available for all column types.</p> <p>S - Calculate the cost using two separate percentages that you enter.</p> <p>The first percentage is entered below and is applied to the contractor's costs for work performed by this contractor. The second percentage is entered on the secondary entry screen and is applied to the contractor's costs for work performed by this contractor's subcontractors. This option is available only for the Overhead and Profit column types.</p> <p>A - Add the amount that you enter below. This option is available to all column types.</p> <p>C - Compute the cost. The computation method depends on the column type. See Compute Option, below.</p>

Field	Description
-------	-------------

Percentage	Depending on the cost method selected above, this field is either a percentage that you enter or is computed by the program.
Amount	Depending on the cost method selected above, this field is either an amount that you enter or is computed by the program. In either case, it represents the Indirect Cost applicable to this contractor for the column type specified.
Total	The total percentage and amount are calculated by the program and placed in the last column on the right.

Compute Option

Selecting C in the Cost Method field causes the program to compute the costs according to a method that is specific to the column type. The three predefined Indirect Cost column types each have a C option available.

For Overhead Columns

For Overhead columns, select C when you want to estimate the contractor's overhead using detail cost items that you enter specifically for the contractor. See "Working With Overhead Items," below.

For Profit

For Profit columns, use C to access a profit-weighted guidelines table on the secondary entry screen. See the next section.

For Bond

For Bond columns, use this option to compute a bond amount using a predefined bond table and a bond class entered on the secondary screen. Refer to the next section.

Working With Overhead Items

When you enter C as the cost method for Overhead columns, the program will compute the Overhead amount by totaling the costs contained in overhead cost items, which you enter for the contractor. Like other cost items in the project, these items may include crews, labor, and equipment.

You enter these detail cost items under a special subtitle called Overhead Items, which is automatically created when you add a contractor record. This subtitle is always the first title on any contractor title list screen at Level 2 or lower (see Figure 7.1 in the previous section for an illustration).

To enter Overhead Items for a contractor, do the following:

1. Highlight the contractor's record on the title list screen. Then press the Enter key.

Result: The contractor title list screen at the next lowest level is displayed.

Note: Do not attempt to move, copy or renumber this holding title.

2. Highlight the Overhead Items title (if it is not already highlighted). Press Shift+F5 (Add Detail).

Result: A detail item entry screen is displayed.

3. Define one or more detail items as needed. You can use the same methods as for defining cost items in the main part of the project. (This includes looking up into a supporting database, if appropriate.) Refer to Sections 6.2 and 6.3 for instructions.

Result: GOLD will total these cost items, place the amount in the Overhead column, and distribute the amount with the other contractor costs.

7.4 Defining Contractors - Secondary Entry Screen

When to Use

The secondary entry screen is used to enter additional information needed by the program to compute contractor's overhead, profit, or bond costs.

You must enter data on the secondary entry screen when any of the following is true.

- You entered S for Separate in the Cost Method field for the Contractor's Overhead or Profit columns.
- You entered C for Compute in the Cost Method field for the Profit column.
- You entered C for Compute in the Cost Method field for the Bond column.

Accessing the Screen

You access the secondary entry screen by pressing Shift+F7 from the primary entry screen. The secondary screen is illustrated in Figure 7.3

Parts of the Screen

The fields on the secondary entry screen are divided into Profit Weighted Guidelines, Separate O & P (Overhead and Profit) on Subs, and Bond Class. The fields and how to use them are discussed below.

FUNCTION	0- International Airport Remodel				
1 HELP	Prime Contractor				
2 ADD	PROFIT WEIGHTED GUIDELINES				
3 TITLES	SEPARATE O & P ON SUB'S				
4 EDIT	OVERHEAD PROFIT				
5 DETAIL	Risk : 0.000 x 20 = 0.00%				
6 LOOKUP	Diff : 0.000 x 15 = 0.00%				
7 NOTES	Size : 0.000 x 15 = 0.00%				
8 SELECT	Period : 0.000 x 15 = 0.00%				
9 MENU	Invest : 0.000 x 5 = 0.00%				
10 EXIT	Assist : 0.000 x 5 = 0.00%				
	Subcon : 0.000 x 25 = 0.00%				
	TOTAL 100 0.00%				
	Bond Class : 3				
	AL				
	8.25% 4.00% 7.50% 3.00% 22.75%				
	12,045 6,322 12,327 5,301 35,994				
	Enter a Bond Class. <F8> to see choices.				
	OTHER EST R PROJECT v5.20F				

Figure 7.3: Secondary Contractor Entry Screen

Profit Weighted Guidelines

As part of its support for U.S. Department of Defense estimating procedures, GOLD provides the Profit Weighted Guidelines table as a method of estimating contractor profit.

To use the table, you enter a decimal value for each factor listed. The program multiplies these values by the weights assigned to each factor to yield a profit percentage for that factor. These individual profit percentages are totaled at the bottom of the screen, and the sum is the profit percentage applied for the contractor.

Note: The weights listed for each factor can be adjusted by your System Administrator through the Edit Bond and Profit Tables option on the Admin Menu.

The following guidelines for each weighting factor are copied from the Engineer Federal Acquisition Regulation Supplement (EFARS).

Risk

Degree of risk. Where the work involves no risk or the degree of risk is very small, the weighting should be .03; as the degree of risk increases, the weighting should be increased up to a maximum of .12.

Lump sum items will have, generally, a higher weighted value than unit price items for which quantities are provided. Other things to consider: the portion of the work to be done by subcontractors, nature of work, where work is to be performed, reasonableness of negotiated costs, amount of labor included in costs, whether the negotiation is before or after performance of work, etc.

Diff

Relative difficulty of work. If the work is most difficult and complex, the weighting should be .12 and should be proportionately reduced to .03 on the simplest of jobs. This factor is tied in to some extent with the degree of risk. Some things to consider: the nature of the work, by whom it is to be done, where, what is the time schedule, etc.

Size

Size of job. All work not in excess of \$100,000 shall be weighted at .12. Work estimated at between \$100,000 and \$5,000,000 shall be proportionately weighted from .12 to .05. Work from \$5,000,000 to \$10,000,000 shall be weighted at .04, and work in excess of \$10,000,000 at .03.

Period

Periods of performance. Jobs in excess of 24 months are to be weighted at .12. Jobs of lesser duration are to be proportionately weighted to a minimum of .03 for jobs not to exceed 30 days.

Invest

Contractor's investment. To be weighted from .03 to .12 on the basis of below average, average, and above average. Things to consider: amount of subcontracting, mobilization payment item, Government-furnished property, method of making progress payments, etc.

Assist

Assistance by Government. To be weighted from .12 to .03 on the basis of average to above average. Things to consider: use of Government-owned property, equipment and facilities; expediting assistance, etc.

Subcon

Subcontracting. To be weighted inversely proportional to the amount of subcontracting. Where 80% or more of the work is to be subcontracted, the weighting is to be .03 and such weighting proportionately increased to .12 where all work is performed by the contractor's own forces.

Separate O&P on Subs

These fields define the contractor's separate overhead and profit markups to be applied to work done by his subcontractors. The field directly below the Overhead and Profit headings is the percentage of the markup, which you enter. The program then computes the amount of the markup and places it in the next field below.

After you have entered S in the Overhead or Profit column on the primary entry screen, you can access these fields on the secondary screen. Enter the separate percentage to be applied to the subcontracted portion of this contractor's work in the Percentage field.

Result: GOLD calculates the separate markup amount (the percentage times the subcontracted portion) and displays the result in the field directly below the Percentage field.

Note: The separate percentage is a running percentage, calculated on the subcontracted portion of the column values from left to right on the primary entry screen.

Bond Class

Use the Bond Class field to enter one of the following bond classes: B, A, or A-1.

How Bond Costs are Computed

GOLD stores bond computation data for each bond class. This data can be modified by your System Administrator through the Edit Bond and Profit Tables option on the Admin Menu. See Section 25.2.

Computation Method

GOLD uses the bond computation data in the Bond Table to calculate the contractor's bond costs as a running percentage. This running percentage is based on the total Direct Costs of work performed by the contractor plus all costs in columns to the left of the Bond column on the primary contractor entry screen.

Example 1

This example shows how GOLD computes bond costs for projects of one year or less duration.

1. A contractor performs work in the project in the amount of \$450,000 (including overhead and profit). Bond Class A is assigned to the contractor on this screen.
2. GOLD refers to the Bond Computation table. It finds a percentage of 1.500% defined for Class A for the range of 0 to \$100,000; and a percentage of 1.000% for the range of \$100,000 to \$500,000.
3. The program multiplies 1.500% times the first \$100,000 of the contractor's amount, and 1.000% times the remaining \$350,000. The resulting amounts of \$1500 and \$3500 are added together to yield a computed Bond total of \$5000.
4. Finally, the \$5000 is converted to a percentage of the contractor's total work amount (\$450,000). This percentage, approximately 1.11%, is applied to all the contractor's work in the project as the markup percentage for Bond.

Projects Longer Than One Year

For projects longer than a year, an additional calculation is performed, using the value in the Additional per month over 12 field on the Bond and Profit Tables Screen.

You enter a project's duration in the Estimated Construction Time field on the Report Title Page Screen. (See Section 23.5.) This figure, entered as a number of workdays (not calendar days), is converted by GOLD to a number of months. GOLD then uses this number of months to compute Bond costs for the project, as illustrated in the following example. If no value is entered in the Estimated Construction Time field, the Bond cost is computed based on a default 12-month duration, as shown in Example 1..

Example 2

In this example, assume that 1.000% is entered in the Additional per month over 12 field.

1. A project duration is defined as 350 working days in the Estimated Construction Time field on the Report Titles Page Screen. GOLD converts this figure to 16 months.
2. Using the Bond Table data, GOLD computes the contractor's Bond premium for the first 12 months as \$6200.
3. For each month over 12, GOLD then adds 1% of \$6200 to the 12-month premium. As there are 16 months, this amounts to $4 * \$62 = \248 . The total Bond premium for this contractor is therefore $\$248 + \$6200 = \$6448$.
4. As in the previous example, the Bond premium is converted to a percentage and then used to mark up all Direct Costs assigned to this contractor in the project.

7.5 Applying Contractors to Costs

Introduction

Once contractor records have been defined in the project, the contractors IDs must be applied to titles and/or individual cost items in order for the contractors' cost markups to be included in the project costs.

Effects of Applying Contractors

Applying a contractor to a title or cost item has the following results:

- The contractor's cost markups (Indirect Costs) are added to the base Direct Costs associated with the title or item. If the Indirect Cost is defined as a percentage, this percentage is multiplied by the base costs and the resulting amount added in. If the Indirect Cost is defined as an amount, a prorated (distributed) portion of this total amount is added to the base costs for the item.
- The cost item becomes part of the contractor's costs as his own work and will be included in the Direct Costs listed for this contractor on the Contractor Direct Summary Report.

Note: The roll-in of cost markups actually takes place when you recalculate the estimate or run reports. Thereafter, Direct Costs shown on title screens and on project reports will include the markups for the assigned contractor *plus* those of any parent contractors up to, but not including, the prime contractor. In other words, the costs shown are the costs to prime. This does not apply to costs shown on detail item screens or in the Unit Cost row of the Detail Report, which are base costs with no markups.

Applying to Cost Items

You can apply contractors to cost items whenever you add or edit. Simply enter the contractor's ID in the Contractor ID field on the entry screen in add or edit mode.

Result: The item's Direct Costs will be assigned to this contractor, with the resulting effects as described above.

Applying to Titles

You can apply contractors to project titles in either of two ways:

- As a default contractor.
- As an override contractor.

Default Contractors

To apply a contractor as a default, enter the contractor's ID on the title entry screen and leave the Contractor Override field set to No.

Result: All Direct Costs entered below this title will be assigned to this default contractor, except for costs that are assigned to a different contractor at a lower level.

Example: In the following example, Contractor EL is applied at the Level 4 title and Contractor ES is applied at the Level 5 Title C. In this case, all the costs under Titles A and B would be assigned to Contractor EL, while those under Title C would be assigned to ES.

Level 4 Title - Contractor EL
Level 5 Title A - No contractor
Level 5 Title B - No contractor
Level 5 Title C - Contractor ES

Override Contractors

To apply a contractor as an override, enter the contractor's ID on the title entry screen and enter Y (for Yes) in the Contractor Override field.

Result: GOLD will ignore all other contractors applied below this title, including those applied to individual cost items. In the example above, if you set the Contractor Override field to Yes on the Level 4 Title entry screen, then the costs for all three Level 5 titles would be applied to EL.

Notes:

- You can restore the contractors entered at lower levels simply by changing the Contractor Override field back to No.
- On title list screens, titles for which a contractor override has been applied are listed with that contractor's ID shown in parentheses. For example: (EL).

7.6 Working With Owner Costs

About Owner Costs

Owner Costs may include escalation, contingency, supervisory costs, and so on. Like Indirect Costs, they are distributed over all or part of a project.

Owner Cost columns are computed after *contract* costs (Direct plus Indirect Costs) and are used to estimate costs outside typical construction contracts.

Where to Enter

On the Set Breakdown Structure Screen, you identify a title level to be used for Owner Costs in the project. This level becomes the default Owner Cost Level.

GOLD allows you to enter Owner Cost information at the default level you defined, and also at the lowest title level (that is, any title that has or will have detail cost items directly beneath it, in any part of the project). Owner Costs entered at the lowest title level override those entered at the default Owner Cost Level.

Note: For Military-type projects (those created using MILTM2 or based on ENG3086 estimates), Owner Costs entered in the project will be used for standard project summary reports. Owner costs defined on the ENG3086 Design Information Screen will be used when printing an ENG3086 listing or exporting to an ENG3086 ASCII file.

Owner Cost Screen

You apply Owner Costs at either the default or lowest title level by using the Owner Cost Screen, which is illustrated in Figure 7.4

FUNCTION	PROJECT DEMAIR International Airport Remodel																																							
1 HELP	Project ID : DEMAIR																																							
2 ADD	Project Name : International Airport Remodel																																							
3 TITLES	<table border="1"> <thead> <tr> <th>ESCALATN</th> <th>DSGN CNT</th> <th>OTHR CNT</th> <th>PRJ MGMT</th> <th>IN HOUSE</th> </tr> </thead> <tbody> <tr> <td>P</td> <td>P</td> <td>P</td> <td>P</td> <td>P</td> </tr> <tr> <td>0.50%</td> <td>0.00%</td> <td>0.00%</td> <td>1.20%</td> <td>1.80%</td> </tr> <tr> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td colspan="4">Escalation Start Date/Index : 00/00</td> <td>0.000</td> </tr> <tr> <td colspan="4">Escalation End Date/Index : 00/00</td> <td>0.000</td> </tr> <tr> <td colspan="4">Contingency Note(s) No. :</td> <td></td> </tr> </tbody> </table>					ESCALATN	DSGN CNT	OTHR CNT	PRJ MGMT	IN HOUSE	P	P	P	P	P	0.50%	0.00%	0.00%	1.20%	1.80%	0.00	0.00	0.00	0.00	0.00	Escalation Start Date/Index : 00/00				0.000	Escalation End Date/Index : 00/00				0.000	Contingency Note(s) No. :				
ESCALATN	DSGN CNT	OTHR CNT	PRJ MGMT	IN HOUSE																																				
P	P	P	P	P																																				
0.50%	0.00%	0.00%	1.20%	1.80%																																				
0.00	0.00	0.00	0.00	0.00																																				
Escalation Start Date/Index : 00/00				0.000																																				
Escalation End Date/Index : 00/00				0.000																																				
Contingency Note(s) No. :																																								
4 EDIT					TOTAL																																			
5 DETAIL					2.64																																			
6 LOOKUP																																								
7 NOTES																																								
8 SELECT																																								
9 MENU																																								
10 EXIT																																								
Press SELECT <F8> to see methods of applying Escalation NOTES EST R PROJECT v5.20F																																								

Figure 7:4 Owner Cost Screen

Procedure

Follow these steps to apply owner costs to a project title at the default Owner Cost Level or lowest title level.

1. Display the title entry screen for the title.
2. Press Alt+W or choose Edit Owner from the Add/Edit Menu.

Result: The Owner Cost Screen is displayed.

3. Complete the relevant fields on the screen by typing in the data and pressing the Enter key. Refer to the paragraphs that follow for field information.
4. When you have finished filling in the screen, press the F10 key *twice* to save your changes and return to the title list screen.

Note: You must exit the title entry screen using the F10 key, *not* the Esc key, or your Owner Cost values will not be saved.

Owner Cost Fields

The column headings of the Owner Costs fields at the top of the screen are determined by the Owner Cost columns, which you define on the Name Project Columns Screen.

Calculating Owner Costs

When entering Owner Costs, you first enter the method of calculation and then the percent or amount, as determined by the method.

Depending on which cost you are calculating, the program lets you choose from among the following methods of calculation:

- O - Set at Owner Level. Automatically entered by the program if Owner Costs are set at a higher title level.
- P - Apply the percentage entered below to the *running total* up to this column. The running total is figured here as the sum of all Direct and Indirect Costs, plus the Owner Costs entered in any columns to the left of the present column. (For the leftmost column on this screen, entering P is the same as entering D.)

After entering P as the method, you then enter the percentage.

- D - Apply the percentage entered below to total contract costs only (that is, total Direct plus Indirect Costs). Exclude other Owner Costs from the computation.

After entering D as the method, you then enter the percentage.

- S - Not used for Owner Costs.
- A - Add the specified amount. After entering A, you enter the amount.
- C - Compute costs based on an escalation factor. Used for the predefined Escalation column type only. Choosing this option moves the highlight to the escalation fields described below so that you can enter the escalation data.

Escalation Fields

You use these fields to compute an escalation factor based on escalation table data that you enter. Escalation tables are available from a number of industry and government sources, such as:

- R.S. Means Company
- Engineering News Record
- F.W. Dodge
- U.S. Government Office of Management and Budget
- U.S. Army Corps of Engineers (Form AR 415-17)

Note: You can cause the Date of the Escalation Schedule you use to be printed in the Project Settings Report by entering the date on the Report Title Page Screen. See Section 23.5.

Field	Description
Escalation Start Date	Date represented by the Start Index.
Start Index	Index at which to begin calculating Escalation costs.
Escalation End Date	Date represented by the End Index.
End Index	<p>Index at which to end calculation of Escalation.</p> <p>The End Index is divided by the Start Index to compute an escalation factor representing the relative cost change between the two indexes. This factor (minus one) is then applied as a running percentage (applied to the sum of Direct plus Indirect plus any preceding Owner Cost column values) to yield the value of the Escalation column.</p>

Contingency Notes Number Field.

Use this field to enter the numbers of one or more contingency notes that apply to the costs shown on this Owner Cost Screen. Refer to the next section for details.

7.7 Working With Contingency Notes

Purpose

Contingency Notes can be attached to an Owner Cost Screen to explain the rationale for a particular cost or percentage as entered on that screen. You can then choose to print the Contingency Notes for a project on the Owner Cost Summary Report.

For example, you might apply a high contingency cost percentage to an excavation activity if there was a high likelihood of encountering large boulders or of striking water. You could then use the Contingency Notes feature to explain the reasoning for the high percentage.

Note: Contingency Notes can be attached to Owner Costs represented in any cost column type. The predefined Contingency Type (discussed in Section 5.4) does not have to be used.

Contingency Notes Window

You enter and view contingency notes in the Contingency Notes Window, which is accessed from the Owner Cost Screen. An example is shown in Figure 7.5.

A single window is defined for the entire Project Database. You enter all of a project's contingency note in this window, and assign each one a number.

Figure 7.5 Contingency Notes Window

Defining Contingency Notes

Use this procedure to enter contingency notes for a project.

1. Access the Owner Cost Screen at the owner level or lowest title level.
2. Position the cursor in the Contingency Notes No. field.
3. Press the F7 key or choose Edit Notes from the Add/Edit Menu.

Result: The Contingency Notes Window is displayed.

4. Type one or more contingency notes in the window. Begin each note with a numeral. If notes already exist in the window, press the Page Down key to reach the end of the list, before adding more notes.

Note: You can use the same special keys as when working in any Notes (F7) window. See Section 15.2.

5. After entering the note(s), press F7 to exit and save.

Result: The notes are stored and will be displayed the next time you access the window.

Attaching Notes to Costs

Once a contingency note is defined, you can attach it the Owner Cost Screen for any title at the Owner Level or lowest title level. If appropriate, you can attach the same note to more than one title. Follow these steps:

1. Move the cursor to the Contingency Notes No. field on the Owner Cost Screen.
2. Enter the number of the note you want to attach. (If necessary, you can view the notes by pressing the F7 key.) You can enter up to four numbers to attach multiple notes. Type a comma after each number.
3. Press the F10 key twice to exit and save.

Printing Contingency Notes

Contingency notes applied in a project can be printed on the Owner Cost Summary Report.

A footnote-type format is used. The numbers of notes are printed to the right of the Total Cost column for the title to which the notes apply. The text of the notes are printed on a separate page at the end of the report.

To print contingency notes, enter Y in the Contingency Notes field on the Other Report Formatting Screen. Then select and print the Owner Cost Summary Report. See Chapter 23 for instructions on creating reports.

CHAPTER 8

WORKING WITH EXISTING PROJECTS

Chapter Overview

This chapter describes methods for accessing and managing Project Databases. It describes selecting from multiple GOLD projects, using project templates, and converting from earlier Department of Defense estimating software.

Chapter 8 contains the following sections:

- 8.1 Selecting a Project Database
- 8.2 Working With Project Templates
- 8.3 Converting Projects From Earlier Versions

8.1 Selecting a Project Database

When to Use

Use the instructions presented here when:

- You need to create a project that mimics the characteristics of a previous project that is not currently displayed in the database window. (See "Inherited Characteristics," below.)
- You need to work with or create a project in a directory other than the one currently shown on the Project Database line in the database window.

Inherited Characteristics

As noted in Chapter 5, when a new Project Database is created, it inherits the structure characteristics of the Project Database currently displayed in the database window.

If you want a new project to mimic the characteristics of an existing project that is not currently displayed, you must first select the existing Project Database so that it appears in the database window.

Selecting an Existing Database in the Same Directory

Follow these steps to select an existing Project Database from the same directory as the project currently shown in the database window. Begin on the Main Menu Screen with the highlight on the Project Database.

1. Press the F8 key.

Result: A window is displayed listing all the Project Databases in the current directory.

2. Use the Arrow keys to move the highlight to the project you want to select. Then press the Enter key.

Result: The database window is redisplayed with the selected Project Database highlighted, and you are asked "Select PROJECT XXXXXX Related Databases? (Y/N) N". If you answer Y, then the software will automatically select the databases that were last used to reprise this project. If those databases are not located on your system, then the system will leave that path highlighted and no databases loaded. If your databases become deselected by mistake, use the Select a Database under the Services menu to reselect the databases you need. Answer N if you do not want to change your currently highlighted supporting databases.

Selecting a Different Directory

Follow these steps to select or add a Project Database in a different directory. Begin on the Main Menu Screen with the highlight on the current Project Database.

1. Press the S key to select the Services Menu.
2. Press the S key again to choose the Select a Database option.

Result: A window is displayed prompting you to enter the Project Database path and ID. The path and ID of the current Project Database is shown as the default.

3. Enter the drive and directory you want to use. (Overtyping as much of the default as is necessary.) Then press Enter.

Results:

- If Project Databases exist in the directory you have entered, then a window listing them is displayed. Move the highlight to select a Project Database from the list, then press Enter. The database window is then redisplayed with the project you have chosen highlighted, and you are asked "Select PROJECT XXXXXX Related Databases? (Y/N) N". If you answer Y, then the software will automatically select the databases that were last used to reprise this project. If those databases are not located on your

system, then the system will leave that path highlighted and no databases loaded. If your databases become deselected by mistake, use the Select a Database under the Services menu to reselect the databases you need. Answer N if you do not want to change your currently highlighted supporting databases.

- If no Project Databases exist in the directory you have entered, the database window is redisplayed, with the new directory shown in the Directory column and the message "(Not Located)" shown in the Name column.

Note: You can proceed with creating a Project Database in the chosen directory, even though "(Not Located)" is displayed. The new project will inherit system default characteristics.

8.2 Working With Project Templates

Purpose

Project templates give you an easy way to begin a project with the structure characteristics predefined the way you need them.

Definition

A project template is a database containing the column and breakdown characteristics for a project. You can use one of the templates supplied with GOLD or create your own templates.

Using a Template

To use a template, select it from the list of available projects before you create a new project. Refer to Section 8.1 for instructions on selecting projects.

Do not add items directly to the template. Instead, with the template file displayed on the project line, press the F2 key to add a new project. This new project will inherit the characteristics of the template.

Creating a Template

To create a new template, follow these steps:

1. Create the project. On the Project Database Edit Screen, you need fill in only the Database ID and Name fields. Use a name that will identify the project as a template, such as XXXTMP.
2. Fill in the Name Project Columns Screen to define the type of project and the content and format of project columns.
3. Complete the Set Breakdown Structure Screen to define the project levels.

8.3 Converting Projects From Earlier Versions

Introduction

GOLD has the additional capability of translating or importing projects built with earlier estimating software.

Translating M-CACES Files

Projects originally created with earlier versions of GOLD, known as M-CACES (or COMPOSER PLUS) can be translated into GOLD format through the Translate option on the MCACES Menu.

Importing CACES Files

ASCII-format project files created with CACES, the Army Corps of Engineers mainframe estimating program, can also be imported into GOLD.

For More Information

Refer to Chapter 13 in *Volume 2, Advanced Options*, for instructions on translating or importing existing projects.

CHAPTER 9

WORKING WITH THE SUPPORTING DATABASES

Purpose

The GOLD supporting databases serve as repositories of cost data that you can quickly and easily copy into an estimate.

The procedures presented in this chapter show you how to add, change, delete, and print data in the supporting databases. Instructions for adding new databases and working with multiple databases are also provided.

Accessing the Supporting Databases

You can access any supporting database by highlighting it on the Main Menu Screen and pressing the Enter key.

You can also access a supporting database by using the Lookup feature from another database. Refer to Chapter 16 for instructions on using Lookup.

Chapter Overview

This chapter provides general instructions for working with the supporting databases used with MCACES GOLD. Specific information relevant to each database type is contained in Chapters 10 - 14.

- 9.1 Adding Titles to a Database
- 9.2 Adding Detail Items
- 9.3 Editing and Deleting
- 9.4 Using the Database Edit Screens
- 9.5 Working With Multiple Databases
- 9.6 Printing From the Supporting Databases

Note: Procedures specific to the Models Database are discussed with the Models Module in *Volume 2, Advanced Options*.

9.1 Adding Titles to a Database

When to Use

You should add new titles to a supporting database any time you are adding detail items which do not logically fit under the existing title structure.

Also, if you are adding a new crew to the Crews Database, or a new assembly to the Assemblies Database, you must first add the appropriate title at the lowest title level.

Maintaining Logical Order

When adding to a database, always consider the logical order of the database, so that your additions will be easy to locate and retrieve. New titles and detail items should be placed where others would logically look for them.

Title Entry Screen

You add titles by accessing and filling out a title entry screen. The screen for the Unit Price Database is illustrated in Figure 9.1.

Figure 9.1: Title Entry Screen, Unit Price Database

Procedure

Use the following procedure to add a title to a supporting database. Begin on the title list screen at the level where you want to add the title.

1. Press the F2 (Add) key.

Result: The title entry screen is displayed, with default data from the previously highlighted title.

2. Type information for the new title in the fields on the screen. Press the Enter key to move from field to field. Refer to the Field Descriptions in the following chapters for details relevant to each database.
3. When you have finished filling in the fields:
 - Press the F10 key to save the new title and exit, *or*
 - Press the Page Down key to save the new title and begin adding another at the same level.

Adding Data Under a New Title

Once you have added a new title, you can subtitles or detail items beneath the title:

- To add a subtitle, highlight the new title on the list screen and press Shift+F3 (Add Subtitle).
- To begin adding detail items, highlight the new title and press Shift+F5 (Add Detail).

9.2 Adding Detail Items

When to Use

Use the following procedure whenever you need to add new detail items to a supporting database.

Search Before Adding

Always search the database to see if the item you need is already included. It may be that several similar items already exist under a title level, and you just need to add one slightly different.

You can search the database by moving manually through the hierarchy of title levels. You can also choose the Find Keyword function (Alt+F7 keys). See Section 17.3 for instructions.

Entry Screens

As with the Project Database, you add detail items to a supporting database by accessing and filling out a detail item entry screen. In the Assemblies Unit Price, and Equipment Rates Databases, you may also fill out a secondary entry screen.

Figure 9.2 shows the primary entry screen in the Unit Price Database.

FUNCTION	05120 1000 Beams, Girders and Columns for 1 and 2 Story																	
1 HELP	UPB ID : MIL 05120 1001																	
2 ADD	Description : Beams,Girders,Clms,1-2 Sty Bldg																	
3 TITLES	Unit of Measure : TON																	
4 EDIT	Contractor : SS																	
5 DETAIL	UPB Override : None																	
6 LOOKUP	Material Price Updated : 05/01/92																	
7 NOTES	Default Material Price : 1000.00																	
8 SELECT																		
9 MENU																		
10 EXIT																		
<table border="1"><thead><tr><th>MANHRS</th><th>LABOR</th><th>EQUIPMNT</th><th>MATERIAL</th><th>UNITCOST</th><th>TOTAL</th></tr></thead><tbody><tr><td>7.44</td><td>155.76</td><td>53.06</td><td>1000.00</td><td>0.00</td><td>1208.82</td></tr></tbody></table>							MANHRS	LABOR	EQUIPMNT	MATERIAL	UNITCOST	TOTAL	7.44	155.76	53.06	1000.00	0.00	1208.82
MANHRS	LABOR	EQUIPMNT	MATERIAL	UNITCOST	TOTAL													
7.44	155.76	53.06	1000.00	0.00	1208.82													
Source Code indicating the type of cost item																		
NOTES OTHER UNIT PRICES v5.29																		

Figure 9.2: Detail Item Entry Screen, Unit Price Database

Procedure

Follow these steps to add a detail item to a supporting database.

1. To access the primary entry screen in add mode, press the F2 key from a browse mode screen.

Result: The detail item entry screen is displayed, containing data from the item that was highlighted on the browse mode screen.

Note: To access the screen in order to add an item under a new title, press Shift+F5 (Add Detail).

2. Fill in the fields on the screen as needed to define the new item. Refer to the Field Descriptions in the following chapters for field information for each database.
3. If you are working in the Unit Price, Assemblies, or Equipment Rates Database and you need to define additional field information, press Shift+F7 to access the secondary entry screen.

After filling in the information, press the F10 key to save the entries and return to the primary screen.

4. When you have finished defining the detail item, press the F10 key to save the item and return to the browse mode screen.

Using Lookup

When adding a detail item, you can also use the Lookup feature to search a subordinate supporting database and copy back information.

From This Database	You Can Look Up Into These Databases
Assemblies	Project Models Unit Price Crews Labor Rates Equipment Rates
Unit Price	Crews
Crews	Labor Rates Equipment Rates

Refer to Chapter 16 for instructions on using Lookup.

9.3 Editing and Deleting

Introduction

Detail items in the supporting databases can be edited in either browse mode or from an entry screen in edit mode. You can also edit titles, and you can delete items or titles.

When to Use

Most often, you will edit the database items to update prices as new information becomes available.

Editing in Browse Mode

Limited editing capabilities for cost items are provided in browse mode, without accessing entry screens.

To edit an item in browse mode, simply type over the entry at the cursor and press the Enter key. The fields that you can edit depend on the database. Refer to the following chapters for details.

Using Edit Mode for Detail Items

Edit mode makes use of the same one or two entry screens as add mode. To access the primary entry screen in edit mode, highlight the item you need to edit on the browse mode screen and then press the F4 key.

Editing Titles

To edit information for a title, highlight the title on the list screen and press the F4 key.

Note on ARA Version

If you have an Area Responsible Agency (ARA) version of the software, you can access and change more fields in the databases than with the standard MCACES GOLD. See the Appendix in Volume 2 for details.

Deleting Titles and Items

You can delete titles or detail items in the supporting databases just as you can in the Project Database. The title or item will be flagged for deletion, and will be removed the next time the database is packed.

- To delete a title, access the title's entry screen, then press Ctrl+F4. Deleting a title deletes all subtitles and detail items beneath the title as well.
- To delete a detail item, highlight the item on the browse mode screen and press Ctrl+F4.

9.4 Using the Database Edit Screens

Purpose

Database edit screens are used to add new supporting databases and to change general information about existing databases. The information that is stored and can be changed depends on the type of database.

Figure 9.3 shows the Unit Price Database Edit Screen as an example.

Figure 9.3 Unit Price Database Edit Screen

Accessing the Edit Screen

You access a database edit screen from the database window on the Main Menu Screen. First, highlight a currently selected database. Then do one of the following.

- If you want to change information about the current database, press the F4 key.
- If you want to add a new database of the same type, press the F2 key.

Changing Screen Information

If you pressed F4, you can change all field entries except the Database ID and Last Reprice References fields. Type the new information in each field you want to change, then press Enter. (Refer to the Field Descriptions below.)

After making your changes, press the F10 key to exit and save.

Adding a New Database

If you pressed the F2 key, the screen is displayed with the cursor in the Database ID field. To add a new database, you must enter an ID in this field. You can fill in the other fields as needed, or leave the defaults as filled in by the program.

After completing the screen, press F10 to exit and save.

Result: A new database of the selected type is created and displayed in the database window. This new database contains only the top one or two levels of titles copied from the previously highlighted database. You can now access the database and begin adding more titles and detail items.

Note: Alternate methods of adding a new database are described in the next section.

Field Descriptions

This table describes all the fields on the database edit screens for the supporting databases. Except where noted, the fields appear on every screen.

Field	Description
Database ID	Six-character code used to identify the database. May include letters, numbers, hyphens, and underscores, but no other symbols or spaces. If you are adding a database, all six characters must be filled in.
Issue Date	Date to be recorded as the date the database was issued. Must be in MM\DD\YY format. On the Equipment Rates database, the issue year must be the same as the year of the EP1110-1-8 for which the equipment rates are effective.
Name	Descriptive name of the database. Up to 32 characters are allowed. The name is displayed in the Name column in the database window.
<u>Last Reprice References Fields</u>	These fields are filled in by the program and indicate the IDs of the supporting databases last used to reprice the current database. These fields do not appear on the Labor and Equipment Rates database edit screens.
<u>Computation Fields</u>	
Measurement System	The units of measure to be used for storage of the data and display on the screen. Options are: <ul style="list-style-type: none"> • Original (the units as entered) • Metric • U.S.
Foreman Additional Amount	Crews Database screen only. Amount to be added to the unit labor rate to compute the foreman rate for each labor item. See "About Foreman and Apprentice Rates," below.

Field	Description
Apprentice Percent	Crews Database screen only. Percent to be multiplied by the unit labor rate to compute the apprentice rate for each labor item. See "About Foreman and Apprentice Rates," below.
Default Productivity	Crews Database screen only. Default value for the Productivity field for all crews in the database.
<u>Currency Fields</u>	The following fields are used to compute currency conversions for the database. This allows you to use the same supporting databases for projects estimated in different currencies. See "Working With Currency Conversion," below.
Currency Symbol	Symbol to be displayed in monetary fields on title list screens. Up to three characters can be used to abbreviate the currency, such as DM for Deutsche marks or YEN for yen.
Currency Description	Name of the currency.
Units for Store/Display	Units for storing monetary values and displaying them on the screen. Options are: O - Ones T - Tens H - Hundreds M - Thousands X - Ten thousands
Units per U.S. Dollar	Ratio of the currency to one U.S. dollar. Examples: <ul style="list-style-type: none"> • If you were working with Japanese yen and the exchange rate was 135 yen per dollar, you would enter 135 in the Units per U.S. Dollar field. • If you were working with Kuwaiti dinars and the exchange rate was 3.40 <i>dollars per dinar</i>, you would enter 0.29 (that is, 1/3.40) in the Units per U.S. Dollar field.

Working With Currency Conversion

You can change the currencies of an existing database at any time. Simply access the database edit screen in edit mode (by pressing the F4 key) and type the new values in the currency fields.

Cautions:

- Be sure to make a backup copy of a database before you change its currency. If currency conversion is interrupted during processing (as by a power failure) the database is rendered useless.
- If you work with different currencies, be sure that *all* currently selected databases are using the same currency before you begin working on a Project or other database. If any database has a non-matching currency, GOLD will issue a warning message and will not allow you to look up into or reprice from that database.

About Foreman and Apprentice Rates

The Labor Rates Database stores a total hourly rate for each labor item. This rate is considered to be the laborer rate for that item.

Rates for foremen and apprentices are computed based the laborer rate and on adjustment values entered on the Crews Database Edit Screen:

- To compute the foreman rate for each item, the program adds to the laborer rate the amount that you enter in the Foreman Additional Amount field.
- To compute the apprentice rate for each item, GOLD multiplies the laborer rate by the percentage that you enter in the Apprentice Percent field.

If you add crews in the Crews Database, you may choose to make a laborer into a foreman or apprentice when you assign the laborer to the crew. Or you may copy a labor item directly from the Labor Rates Database into a project and apply the foreman or apprentice rate on the secondary cost item entry screen in the Project Database (See Section 6.2).

Whenever you reprice labor and equipment, the adjustment values set for the currently selected Crews Database are used to compute labor costs for foremen and apprentices.

9.5 Working With Multiple Databases

Purpose

GOLD allows you to work with multiple versions of all of the supporting databases. This gives you great flexibility for building different estimates from different supporting databases, and also in repricing estimates.

Creating Multiple Databases

GOLD provides several methods for creating multiple copies of supporting databases:

- You can use the F2 (Add) key and the database edit screen, as described in Section 9.4. This method is useful if you want to build the new database starting with only upper-level titles.
- You can use the Copy a Database option on the Services Menu to create a duplicate of the present database with a different ID. You can then access the duplicate and make whatever changes are needed. Use this method if you want the new database to be substantially the same as the present one. See Section 24.3 for instructions on using Copy a Database.
- You can use the Extract To function on the Mark Menu to extract whatever portion of the current database you choose and place it in a new database. See Section 18.8 for instructions.

Repricing Labor and Equipment

A particularly useful application of multiple databases is for repricing labor and equipment costs.

You can create multiple Labor Rates and Equipment Rates Databases to reflect the varying costs of construction in different geographical locations or at different times. You can then easily "move" an estimate to a different location (or forward in time). Use the following steps:

1. Select the Labor and/or Equipment Rates Database you want, using the Select a Database option on the Services Menu. (See Section 24.2 for instructions.)
2. Reprice the estimate, using the Reprice Labor and Equipment option on the Prepare Menu. (Refer to Section 22.3.)

Result: The estimate now reflects the labor and equipment costs stored in the selected databases.

9.6 Printing From the Supporting Databases

Introduction

GOLD provides two options for printing from the supporting databases:

- Print Database Listing To
- Print Single Element

Print Database Listing To

The Print Database Listing To option on the Reports Menu allows you to print all or part of the following databases:

- Unit Price
- Crews
- Labor Rates
- Equipment Rates

You can choose to include or exclude items from the listing based on their dates and source IDs. You can also choose from formatting options for the listing.

Refer to Section 23.8 for instructions.

Print Single Element

The Print Single Element function on the Tools Menu can be used to print all or part of a Models or Assemblies Database. The information provided is similar to a Detail Report for a project (and also includes Link Listing information, if the Models Module is part of your GOLD system). See Section 20.1 for instructions.

CHAPTER 10

THE UNIT PRICE DATABASE

Purpose

The Unit Price Database (also referred to as the UPB for Unit Price Book) is a storage place for individual cost items. Each detail item can include costs for material, labor, equipment, and unit cost, as well as shipping weight and shipping volume figures.

Often, the items in this database contain crew IDs from the Crews Database. This allows you to reprice the Unit Price Database labor and equipment costs based on crew compositions and current prices in the Labor and Equipment Rates Databases.

In turn, information stored in the Unit Price Database can serve as input into the Assemblies or Models Database, or directly into the Project Database.

Supplied Unit Price Database

The Unit Price Database supplied with MCACES GOLD is based on U.S. Army Corps of Engineers data. This database is based on the Corps' Unit Price Book and is therefore abbreviated UPB. The UPB organizes cost items under a hierarchy of titles that corresponds to the Construction Specifications Institute (CSI) classification system. The structure of the UPB is examined in detail in Section 10.1.

Chapter Overview

This chapter describes the structure of the supplied Unit Price Database and gives instructions for editing, deleting, and adding to the database. Instructions for adjusting the material prices of items and for using the database ID screen are also provided.

The following sections are included in Chapter 10:

- 10.1 Structure of the Database
- 10.2 UPB Titles
- 10.3 Adjusting Material Prices
- 10.4 UPB Detail Items
- 10.5 Working With Modifiers

10.1 Structure of the Database

Introduction

This section describes the structure of the Unit Price Database supplied with GOLD.

Accessing the Database

You can access the Unit Price Database by highlighting it on the Main Menu Screen and pressing Enter.

You can also access the database from within the Project, Models, or Assemblies Databases, by using the Lookup feature. Refer to Chapter 16 for instructions.

Title Levels

When you first access the database, the Level 1 title list screen is displayed. The 16 titles here are the same as the 16 Construction Specifications Institute (CSI) Divisions.

Levels 2 - 6 of the database represent further breakdowns by category of unit cost items. Some portions of the database use all six title levels, others do not.

Detail Level

Individual cost items are listed on a detail-level list screen (browse mode screen).

You can view each item individually by highlighting the item and pressing F4.

Result: A primary entry screen for the item is displayed, in edit mode.

You can display a secondary entry screen by pressing Shift+F7. Together the primary and secondary screens include all the fields shown in browse mode, plus additional fields. These screens are used to add or edit cost items, depending on the mode.

Note: Refer to Section 10.4 for descriptions of each field on the browse and entry screens.

10.2 UPB Titles

Entry Screen

The title entry screen for the Unit Price Database is illustrated in Figure 10.1.

Figure 10.1: Title Entry Screen, Unit Price Database

Field Descriptions

The titles entry screen consists of two windows. Fields in the top window are used to define the title. They are described below.

Fields in the lower window are used to adjust the material prices of all items beneath the title. See Section 10.3 for instructions.

Field	Description
UPB ID	Unit Price Book ID. Database ID of the title.
Level	Database level of the title. Filled in by the program.
Name	Name of the title. The descriptive name can be expanded by using the Notes feature.

10.3 Adjusting Material Prices

Purpose

The Material Adjustment feature allows you to change the material pricing of all cost items beneath a title in the Unit Price Database.

Title Entry Screen

The material prices are adjusted by a percentage, which you specify on the lower portion of the UPB title entry screen (Figure 10.1). Field descriptions are provided at the end of this section.

When to Use

Use this feature when you need to update prices for a range of materials in the database. For example, you could update all structural steel prices to reflect an overall cost change in the steel industry.

Choosing the Title Level

You can choose to adjust prices below a title at any title level. If you choose a title with subtitles, all detail items below all subtitles are adjusted.

You can also choose to adjust by different percentages at different levels, as described below.

Adjusting for a Single Title

Follow these steps to adjust material pricing for items below a specific title in the Unit Price Database.

1. From the appropriate title list screen, highlight the title beneath which you want to adjust prices, then press F4.

Result: The entry screen for the selected title is displayed in edit mode.

2. If you know the percent you need to use for the adjustment, enter it in the Percent Difference field and press Enter.

Note: To raise the price, enter a positive percentage. To lower the price, enter a negative percentage (that is, type a minus sign before the number.)

Result: The Pending field is set to Yes.

Go on to Step 5.

3. If you do not know the percent you need, choose an item representative of the group to be adjusted and enter its database ID in the Material Adjustment Item field.

Result: The item's Name and Current Price are displayed in the appropriate fields.

4. Reprice the item through a local supplier and enter the new price in the Adjusted Price field, then press Enter.

Result: The program compares the current and adjusted prices, computes the percentage of adjustment, and enters it in the Percent Difference field. The Pending field is set to Yes.

5. Press Alt+F2 or choose the Reprice Material option from the Compute Menu.

Result: Material prices for all detail items below this title are adjusted by the specified percentage.

Adjusting for the Entire Database

If you are adjusting prices for more than one title, you can choose to update all prices in the database at one time.

Note: This procedure uses the Update UPB w/Mat'l Indicator option on the Utilities Menu. The Utilities Menu is described in detail in Volume 2.

1. Repeat the above procedure (except for Step 5) for every title for which you want prices updated. Each time, instead of pressing Alt+F2 as described above, press F10 to exit the entry screen.
2. When you have set the Percent Difference for all the titles you need to adjust, press Shift+F10 to exit the Unit Price Database.
3. From the Main Menu Screen, press U to select the Utilities Menu. Highlight the Update UPB w/Material Indicator option and press Enter.

Result: A window is displayed that allows you to specify details of the update.

4. Type a date or press Enter to accept the current date. Items that have a date later than this (recorded in the Material Price Updated field) will not be changed.

You can also choose to Include or Exclude items for which a user has overridden the material price. Choose Include or Exclude, then press Enter.

Result: Material prices are adjusted throughout the Unit Price Database for all items below titles where the Pending Field is set to Yes.

Making Different Adjustments at Different Levels

You can make different material price adjustments at different title levels in the database.

For example, you could set up an adjustment to all items below a Level 1 title by 2%. You could then make different adjustments (say, 2.1%, 1.8%, and 1.7%) for three of the subtitles below the Level 1 title. These excepted subtitles can be at the same or different levels below the Level 1 title.

You can also choose not to adjust items below one or more subtitles when you are adjusting an upper-level title. Simply enter 0 in the Percent Difference field for the titles for which you do not want prices to change.

Field Descriptions

This table describes the fields on the lower part of the title entry screen, which are used to adjust material pricing.

Field	Description
Material Adjustment Item	UPB ID of a cost item referenced from the database so that you can enter an Adjusted Price and compute the Percent Difference. You fill in this field only if you do not know the percent you need to use.
Name	Description of the cost item referenced from the database. Filled in by the program.
Current Price	Current price of the referenced cost item. Filled in by the program.
Adjusted Price	New price for the cost item. You fill in this field after the program displays the current price.
Percent Difference	Percentage by which the material prices will be adjusted for all cost items below this title. You can enter a percentage or compute it, using the fields above. A positive percentage increases prices. A negative percentage lowers the prices.
Pending	GOLD enters Yes in this field when adjustments to material pricing are pending for the cost items below this title.

10.4 UPB Detail Items

Primary Entry Screen

As in the Project Database, Unit Price Database detail cost items have both a primary and secondary entry screen associated with them. Figure 10.2 illustrates the primary screen.

FUNCTION	
1 HELP	
2 ADD	
3 TITLES	
4 EDIT	
5 DETAIL	
6 LOOKUP	
7 NOTES	
8 SELECT	
9 MENU	
10 EXIT	

05120 1000 Beams, Girders and Columns for 1 and 2 Story

UPB ID : MIL 05120 1001

Description : Beams,Girders,Clnms,1-2 Sty Bldg

Unit of Measure : TON

Contractor : SS

UPB Override : None

Material Price Updated : 05/01/92

Default Material Price : 1000.00

MANHRS	LABOR	EQUIPMNT	MATERIAL	UNITCOST	TOTAL
7.44	155.76	53.06	1000.00	0.00	1208.82

Source Code indicating the type of cost item

NOTES OTHER UNIT PRICES v5.29

Figure 10.2: Detail Item Entry Screen, Unit Price Database

Field Descriptions

The primary entry screen contains the following fields for each cost item.

Field	Description
UPB ID	<p>The first part of this field is a 3-character ID specifying the type of the item. Codes include the following:</p> <ul style="list-style-type: none">• MIL - Building construction item.• CIV - Civil works item.• HTW - Hazardous waste construction item.• RAD - Radioactive waste item• TUN - Tunneling item. <p>When you add an item, the program automatically fills in the first part as USR for user-defined.</p> <p>The second and third parts of this field are each 5-character IDs used to place the item in the database hierarchy. When adding an item, choose an ID of up to 10 characters that places the item between its title's ID (shown in the upper portion of the screen) and the ID of the next title.</p>
Description	Description of the cost item. The description can be expanded through use of the Notes feature.
Unit of Measure	<p>Unit of Measure applied to the item.</p> <p>Refer to Appendix B for valid units of measure.</p>
Contractor	<p>Contractor ID applied to this item. This ID is supplied as a default, which you can change if needed when you copy the item into a project. Refer to Section 7.3 for a list of recommended Contractor IDs.</p> <p>Note: MCACES GOLD UPBs for 1991 and earlier do not store a contractor ID. Therefore, if you load an older UPB with GOLD 5.20, this field will appear on the screen but will be blank and inaccessible to the cursor.</p>

Field	Description
UPB Override	<p>This field is filled in by the program. The field indicates whether the cost data for this item have been changed by the user. Values are:</p> <ul style="list-style-type: none"> • Labor/Equipment - A user has modified the labor or equipment unit costs or the crew output, or has applied an override to the crew referenced by the item. • Material - A user has modified the material unit cost. • Both - A user has modified material data and labor, equipment, or crew data. • None - No overrides have been made. The item still has its original database values. (Or the item is user-created.)
Material Price Updated	<p>Date when the material price for this cost item was last updated. The program fills in the present computer system date when you are adding a new item,</p>
Default Material Price	<p>Material unit cost assigned to the item when the database was first compiled. Not changed until the database is recompiled by its developer.</p>

Field	Description
Manhrs	<p>Number of manhours required to perform the specified work.</p> <p>If crews are used, GOLD calculates this figure by dividing the number of worker hours in the crew by the crew output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.) Adjusting the hourly output will therefore change this value.</p> <p>Note: This value is shown on project backup reports as an aid in scheduling. It is also shown in the Project Database Manhours cost column, if one is defined.</p>
Labor	<p>Unit labor cost associated with the item.</p> <p>If crews are used, this cost equals the crew's total hourly labor cost divided by the crew output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.)</p>
Equip	<p>Unit equipment cost associated with the item.</p> <p>If crews are used, this cost equals the crew hourly equipment cost divided by the hourly output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.)</p>
Material	Unit material cost associated with the item.
UPB Unit Cost	Unit cost for subcontractor quotes.
Total	Total unit cost of the item. The sum of the Labor, Equipment, Material, and Subcontractor unit costs.

Secondary Entry Screen

You can use the secondary entry screen to fill in crew and/or shipping data for the item. The screen is illustrated in Figure 10.3.

FUNCTION	05120 1000 Beams, Girders and Columns for 1 and 2 Story				
1 HELP	UPB ID : <u>USE</u> 05120 1001				
2 ADD	Description : Beams,Girders,Clnms,1-2 Sty Bldg Beams,Girders,Clnms,1-2 Sty Bldg				
3 TITLES	Crew ID : <u>SIWSM</u>				
4 EDIT	Hourly Output : 1.0750 TON				
5 DETAIL	Unit Weight : 1.0000 TON				
6 LOOKUP	Unit Volume : 0.0000 N/A				
7 NOTES	Equiv Shipping Weight : 907.1860 KG				
8 SELECT	TOTAL				
9 MENU	0.00	0.00	0.00	0.00	0.00
10 EXIT					
Crews Database ID of the crew referenced for cost information					
<u>OTHER</u> <u>UNIT PRICES</u> v5.20F					

Figure 10.3: Secondary Detail Item Entry Screen, Unit Price Database

Field Descriptions

Field	Description
<u>Crew Fields</u>	
Crew ID	ID of a crew in the Crews Database that the item references for labor and equipment costs.
Hourly Output	The crew's estimated output per unit of measure associated with the cost item.
<u>Shipping Fields</u>	
Unit Weight	Weight per unit of measure for the cost item. When adding an item, you enter both the weight and the unit of measure. See Appendix B for valid units of measure.

Field	Description
Unit Volume	<p>Volume per unit of measure. Used to compute the equivalent shipping weight for low-density items, as explained below.</p> <p>When adding an item, you enter both the volume and unit of measure.</p> <p>See Appendix B for valid units of measure.</p>
Equivalent Shipping Weight	<p>Computed by the program. This is the weight the program uses to calculate the shipping cost of the item.</p> <p>If the item weighs less than 56 lbs./cubic foot, the program computes the equivalent shipping weight by multiplying the unit volume times the standard density of 56 lbs./cf.</p> <p>Otherwise, the program sets the Equivalent Shipping Weight field equal to the actual unit weight entered above.</p> <p>This field is computed in kilograms regardless of the unit of measure used to enter the unit weight and unit volume.</p>

Browse Mode Screen

For each detail item, the browse mode screen in the Unit Price Database lists some, but not all, of the fields from the detail entry screen. The following fields on the browse mode screen are accessible for editing:

- Cost Item Description
- Output
- Manhours
- Labor
- Equipment
- Material
- UPB Unit Cost Column

Note: Additional editing capabilities are provided if you have an Area Responsible Agency (ARA) version of the software. See the Appendix in Volume 2.

10.5 Working With Modifiers

About Modifiers

Modifiers allow you to change the labor, material, and/or shipping cost of items by adding or deducting optional quality or scope. A library of more than 1000 modifiers is provided with the Unit Price Database supplied with GOLD.

Working in the Unit Price Database, you can add new modifiers to this library or change the characteristics of current modifiers. You can also delete modifiers from the library.

Modifier Entry Screen

When you add or edit modifiers in the UPB Library, you use the Modifier Entry Screen, which is shown in Figure 10.4.

03110 1110 Wall Footings (Continuous)	
FUNCTION	
1 HELP	
2 ADD	
3 TITLES	
4 EDIT	
5 DETAIL	
6 LOOKUP	
7 NOTES	
8 SELECT	
9 MENU	
10 EXIT	

EDIT Modifier

Modifier ID : **111 03110 1901**

ID at Start of Range : **03110 1000**
ID at End of Range : **03110 1702**

Description : **For Foundations More Than 20 Ft
(6.1M) Below Grade Add To Crew**

Adjust Labor Price : **25.00%**

Apply Mat'l & Shipping as : **Percent**

Adjust Material Price : **0.00%**
Adjust Shipping Weight : **0.00%**
Adjust Shipping Volume : **0.00%**

0.09 1.55 0.05 1.04 2.64

Source ID associated with the modifier
NOTES **OTHER** **UNIT PRICES** v5.20F

Figure 10.4: Modifier Entry Screen

Modifier IDs

Each modifier in the library is assigned a modifier ID, which is equivalent to a Unit Price Database ID for that modifier.

The first five characters of the modifier ID are the same as the first five characters of the UPB IDs of all items to which the modifier can be applied.

Example: The modifier represented by modifier ID 03110 29901 can only be assigned to items with a UPB ID that begins with 03110.

Note: There is no restriction against a modifier ID being the same as the UPB ID of an item.

Modifier Ranges

Each modifier in the library is also assigned a range of valid UPB IDs. This range indicates all the UPB items to which the modifier can be applied.

Example: Modifier ID 03110 29901 might be assigned to the range UPB items with UPB IDs 03110 2500 to 03110 2574. (Note that the modifier ID in this case is outside the range of the UPB IDs.)

Editing a Modifier in the Library

Follow these steps to edit a modifier in the UPB Library. Begin at a detail item entry screen.

1. Press Ctrl+O or select the Edit Modifier function from the Compute Menu.

Result: The Find Keyword Window is displayed. The Match ID field contains the UPB ID of the current detail item.

2. Do one of the following:

- To view a list of the available modifiers for the current item, press Enter.
- To search for a list of modifiers by ID or name, enter a partial modifier ID in the Match ID field, or enter a key word or character string in the Description field. Then press Enter.

Result: A window is displayed listing the available modifiers based on your selection.

3. Move the highlight to the modifier you want to edit, then press Enter.

Result: The Modifier Entry Screen is displayed. This screen shows the detail data for the selected modifier.

4. Type changes in the fields as needed. Refer to the Field Descriptions below for information. After typing the changes, press F10.

Result: The changes are saved. The detail item entry screen is redisplayed.

Adding a Modifier to the Library

To add a new modifier to the library, begin at a detail item entry screen.

1. Press Alt+O or select the Add Modifier function from the Compute Menu.

Result: The Modifier Entry Screen is displayed.

2. Fill in the screen fields as needed to define the modifier. See the Field Descriptions below.

After filling in the data, press F10 to exit and save.

Field Descriptions

Following are the fields on the Modifier Entry Screen.

Field	Description
Modifier ID	Database ID assigned to the modifier. Must have the same first five characters as the UPB IDs of items to which the modifier can be applied.
ID at Start of Range	UPB ID of the first cost item in the database to which this modifier can be applied. The first five characters are filled in by the program based on the Modifier ID.
ID at End of Range	UPB ID of the last cost item in the database to which this modifier can be applied. The first five characters are filled in by the program based on the Modifier ID.
Adjust Labor Price	Percentage of adjustment made to a cost item's labor price when this modifier is applied to the item.

Field	Description
Apply Mat'l and Shipping as	Indicates the method used to apply this modifier's material and/or shipping adjustments. Values are: Percent - The adjustment percentage is multiplied by the item's base unit cost or value. Amount - The adjustment amount is added to the base unit cost or value.
Adjust Material Price	Percentage or amount of adjustment made to a cost item's material price when this modifier is applied to the item.
Unit of Measure	Unit of measure fields are positioned next to the Adjust Material Price, Adjust Shipping Weight, and Adjust Shipping Volume fields. These unit of measure fields are used if you enter the adjustments as amounts. The default in each case is the unit of measure used in the current item. Note: If a modifier uses a different unit of measure than an item, the program will make the necessary conversion when the modifier is applied to the item.
Adjust Shipping Weight	Percentage or amount of adjustment made to a cost item's unit weight when this modifier is applied.
Adjust Shipping Volume	Percentage or amount of adjustment to a cost item's unit volume when this modifier is applied.

Deleting Modifiers From the Library

You can delete a modifier from the library just as you can delete cost items. Follow these steps:

1. Access the modifier's entry screen, as described above under "Editing a Modifier in the Library."
2. Press Ctrl+F4 (Delete).

Result: The program prompts you to confirm the deletion.

3. Press Y to confirm.

CHAPTER 11

THE CREWS DATABASE

Purpose

The Crews Database is used to group labor and equipment costs into crews. Each cost item in the Crews Database corresponds to a detail cost item in either the Labor Rates or Equipment Rates Database. The Crews Database should be viewed as a library of crew compositions, which are used to access the pricing data stored in the Labor Rates and Equipment Rates Databases.

Crew compositions can be referenced to generate labor and equipment cost data for the Project, Models, Assemblies, and Unit Price Databases.

Supplied Crews Database

The Crews Database supplied with GOLD contains several hundred crews developed by the Army Corps of Engineers. The structure of this database is examined in detail in Section 11.2.

Chapter Overview

This chapter explains the concept of crews in detail. It also describes the structure of the Crews Database supplied with GOLD and gives instructions for adding, editing, and deleting items in the database.

These sections are included:

- 11.1 How Crews Are Used
- 11.2 Structure of the Database
- 11.3 Crew Titles
- 11.4 Crew Members

11.1 How Crews Are Used

Definition

In GOLD, a *crew* is a grouping of the labor and equipment items required to accomplish a specified type of work.

In the Crews Database, a crew is defined as a title that groups together a number of detail labor and/or equipment items.

Crew Members

Each detail cost item beneath the crew title is referred to as a *crew member*. Crew members can represent either labor or equipment costs.

A single crew member may contain labor costs for several actual workers paid at the same rate, or for only a portion of a single worker's rate. This is determined by a Quantity field included in the cost item.

Example

A crew consisting of three carpenters, and one apprentice, using small tools, and supervised by a foreman, might be defined as having the following members.

- One laborer member. Quantity = 3, for the three carpenters, all paid the same rate.
- One apprentice member. Quantity = 1.
- One small tools member. Quantity = 1. (Small tools are generally estimated as an hourly allowance on a per average crew basis.)
- One foreman member. Quantity = 0.25. This assumes the foreman devotes only 25% of his time to this crew.

How Crews Reference Other Databases

Each crew in the Crews Database references the Labor Rates Database to price its labor members. If the crew uses equipment, it also references the Equipment Rates Database to price the equipment members.

How Other Databases Reference Crews

In turn, crews can be referenced by cost items in the Project, Models, Assemblies, and Unit Price Databases, to obtain labor and equipment pricing for these cost items.

Example

Expanding on the example above, the carpenter crew might be referenced by a cost item for a plywood roofing task in the Unit Price Database.

- The labor cost of each crew member is computed as the member quantity times the rate for that member.

$$3 \times 9.89 \text{ (laborer rate)} = \$29.67$$

$$1 \times 7.91 \text{ (apprentice rate)} = \$7.91$$

$$0.25 \times 10.39 \text{ (foreman rate)} = \$2.60$$

- The total hourly labor cost of the crew is then computed as the sum of these individual costs.

$$29.67 + 7.91 + 2.60 = \$40.18$$

- Similarly, the hourly equipment cost of the crew is computed as one times the small tools rate.

$$1 \times 1.35 = \$1.35.$$

- In the Unit Price Database, the hourly output for this crew performing the roofing task is estimated at 175 SF per HR.

- This hourly output value is multiplied by the Crew Productivity value of 1.00, which is stored in the Crews Database. (Productivity values other than 1.00 can be used if conditions warrant. See the Field Description in Section 11.3.)

$$175 \times 1.00 = 175 \text{ SF per HR.}$$

- The unit labor cost for this item in the UPB is then computed as the crew's hourly labor cost divided by the calculated hourly output:

$$\$40.18 \text{ per HR} / 175 \text{ SF per HR} = \$0.23 \text{ per SF.}$$

- The unit equipment cost is likewise computed:

$$\$1.35 / 175 = \$0.01.$$

Crews as Assemblies

Crews can also be copied to the lowest title level in the Project or Models Database. In this case, the crew becomes a lowest-level title, and its members become individual cost items beneath that title.

This method of using crews is referred to as "crews as assemblies," and is explained in Section 6.6.

11.2 Structure of the Database

Introduction

The Crews Database supplied with GOLD is organized into three title levels and a detail level. This section describes the structure of the database in detail.

Accessing the Database

You can access the Crews Database by highlighting it on the Main Menu Screen and pressing Enter.

You can also access the database from the Project, Assemblies, Models, and Unit Price Databases by using the Lookup feature. Refer to Chapter 16 for instructions on using Lookup.

Title Levels 1 and 2

The first two title levels are used to group the data by the type of labor performed.

- Level 1 divides the database into general types of work:
 - Architectural Crews
 - Civil Works Crews
 - Electrical Crews
 - Hazardous, Toxic & Radioactive Waste Specific Crews
 - Mechanical Crews
 - Structural Crews
 - Tunneling Crews
 - Universal (General) Crews
 - Outside Crews
 - Maintenance Crews
 - User Created Crews
- Level 2 provides a further breakdown, which differs depending on the Level 1 category. The Civil section breaks down the crews based primarily on the type of equipment employed by each crew. The other sections organize the crews based on the predominant trade employed.

Title Level 3

The actual crews are designated as Level 3 titles. Each crew is listed on a Level 3 title screen, along with the total unit cost of the crew.

Note: An asterisk (*) to the right of the Crew ID on the title list screen indicates that an Override has been applied to this crew. Refer to the description of the Override field in Section 11.3.

Detail Level

The individual crew members are listed as detail items beneath Level 3. To view the members, select a crew title at Level 3 and press the Enter key to display the browse mode screen.

Crew members correspond to detail items in the Labor Rates or Equipment Rates Database.

- Equipment members can use the average, severe, or standby rates from Equipment Rates Database.
- Labor members can use the foreman, laborer, apprentice rates from the labor rates database.

You can view each crew member individually by highlighting it and pressing F4.

Result: An entry screen for the item is displayed, in edit mode.

The entry screen contains the same fields as the browse mode screen. Refer to Section 11.4 for field descriptions.

Note: On the browse mode screen, a Y to the right of the Total Cost field indicates that a Member Override has been applied to this crew member. Refer to the description of the Member Override field in Section 11.4.

11.3 Crew Titles

Title Levels

Crews are defined as titles at Level 3. Levels 1 and 2 represent upper-level categories for the crews.

Upper-Level Entry Screen

Figure 11.1 shows an example of a upper-level title entry screen in the Crews Database.

Figure 11.1 Upper Level Title Entry Screen, Crews Database

Field Descriptions

Field	Description
Crew Title ID	Database ID of the title. Choose an ID to place the title logically in the list.
Level	Database level of the title. Filled in by the program.
Name	Name to identify the title. You can extend the descriptive name using the Notes feature.

Level 3 Entry Screen

Crews are added as titles at Level 3. The entry screen contains more information than the entry screen for upper-level titles. The screen is shown in Figure 11.2.

Figure 11.2: Crew Title Entry Screen

Field Descriptions

The entry screen for crews consists of two parts. When adding a crew, you enter information in the fields in the upper part. The fields in the lower part show quantity and cost data for the crew. This data will be all zeros until you add crew members.

Field	Description
Crew ID	Database ID of the crew. The range of available IDs is determined by the upper-level title. The program will prompt you if you enter a title out of range.
Description	Description of the crew. You can extend the description by using the Notes feature.
Crew Unit	Unit of measure applied to the cost of the crew. Usually hours (HR), though other units of time are acceptable. (Refer to Appendix B for valid units.)

Field	Description
Crew Productivity	<p>Productivity figure assigned to the crew.</p> <p>An entry of 1.00 represents standard U.S. productivity. If conditions warrant the crew to only work at 80%, for example, then .80 should be entered.</p> <p>When GOLD computes crew-dependent costs for a cost item, it multiplies the Crew Productivity value times the Hourly Output figure (as entered for the item in the Unit Price, Assemblies, Models, or Project Database.) The resulting output figure is then divided into the crew's total labor and equipment costs to yield the unit labor and equipment costs for the item. (Refer to the Example in Section 11.1).</p> <p>The default for this field is set on the Crews Database Edit Screen. See Section 9.4.</p>
Override	<p>This field is set to Yes by the program when any of the following are true:</p> <ul style="list-style-type: none"> • A user has changed the crew title information. • A user has added or deleted crew members. • A user has changed information about <i>any</i> of the crew members (so that the Member Override field on any crew member entry screen is set to Yes).
Last Update	<p>Date when crew information was last updated. When you are adding a crew, the computer system date is automatically entered here.</p>
Labor Members	<p>Quantity: The total amount of time, per the unit of measure, charged in the crew cost for all labor members.</p> <p>Total: Total cost of labor time per the unit of measure.</p>

Field	Description
Equipment Members	<p>Quantity: The total amount of time, per the unit of measure, charged in the crew cost for all equipment members.</p> <p>Total: Total cost of equipment time per the unit of measure.</p>
Totals	<p>Quantity: Total amount of labor and equipment time.</p> <p>Total: Total cost of the crew, per the unit of measure.</p>

11.4 Crew Members

Crew Member Entry Screen

Crew members are stored at the detail level beneath title Level 3. The entry screen is shown in Figure 11.3.

Figure 11.3: Crew Member Entry Screen

Field Descriptions

Field	Description
Crew Member ID	<p>This field consists of 3 parts:</p> <p><i>Source</i> is a 3-character tag that identifies the original creator of the crew. Values include USR for user-created, MIL for Corps military building development, CIV for Civil works, and so forth.</p> <p><i>User ID</i> is an optional entry of up to 4 characters that determines the order crew members are displayed in browse mode and in listings.</p> <p><i>Member ID</i> is the ID of this item in either the Labor or Equipment Rates Database. Up to 10 characters may be used. If you enter a member ID with no match in the appropriate database, the program issues a warning message but allows you to continue.</p>
Description	Description of the crew member. Copied from the Labor or Equipment Rates Database.

Field	Description
Crew Member Type	<p>Identifies the type of rate used by this crew member. Codes are:</p> <p>E - Equipment (Average) - Uses the unit rate for average conditions from the Equipment Rates Database.</p> <p>S - Severe Equipment - Uses the unit rate for severe conditions from the Equipment Rates Database.</p> <p>U - Unused/Standby - Uses the unit standby rate from the Equipment Rates Database.</p> <p>L - Laborer. Uses the unit rate in the Labor Rates Database.</p> <p>A - Apprentice. Uses a preset percentage of the unit rate in the Labor Rates Database. For example, 80%.</p> <p>F - Foreman. Adds a preset amount to the unit rate in the Labor Rates Database. For example, \$.50 per hour.</p> <p>Note: The Apprentice and Foreman adjustment values are set on the Crews Database Edit Screen, accessed from the Main Menu screen (see Section 0.4).</p> <p>After copying an item into the Crew Database from the Labor or Equipment Rates Database, you can use this field to select the appropriate rate.</p> <p>On the browse mode screen, this field is unlabeled and indicated only by the 1-letter code.</p>
Crew Member Rate	<p>Cost per unit of measure for this member. Copied by the program from the appropriate database.</p>

Field	Description
Unit of Measure	Unit of measure applied to this crew member's rate.
Member Override	Filled in by the program. Indicates whether a user has changed any information about this crew member since the Crews Database was created. Values are Yes and No.
Crew Unit	Unit of measure applied to the Crew as defined on the crew title screen.
Member Quantity	Quantity of time, per the unit of measure, charged for this member. Can also be viewed as the number of this type of member employed in the crew.
Total Hours	Total number of hours, per crew hour, charged for this member. (Same as the Member Quantity if the crew unit is hours.)
Total Cost	Total unit cost of this member. Equal to the crew member rate times the member quantity.

Browse Mode Screen

The browse mode screen in the Crews Database lists the same fields as the detail entry screen. The following fields on the browse mode screen are accessible for editing:

- UID (User ID)
- Member ID
- Item Description
- Quantity
- Rate / Unit of Measure

CHAPTER 12

THE LABOR RATES DATABASE

Purpose

The Labor Rates Database stores labor costs, including the costs of taxes, insurance, fringe benefits and travel.

A labor cost item listed here can be copied directly into the Project, Assemblies or Models Database as a line item, or it can be combined with other labor and equipment cost items to become crew members in the Crews Database.

Supplied Database

The Labor Rates Database supplied with GOLD is based on Army Corps of Engineers data. It contains approximately 80 labor rate items organized under one title level.

Chapter Overview

Chapter 12 describes the structure of the supplied Labor Rates Database and of its title and detail records.

12.1 Structure of the Database

12.2 Labor Rate Titles

12.3 Labor Rate Detail Items

12.1 Structure of the Database

Introduction

The Labor Rates Database supplied with GOLD is organized into a single title level and a detail level.

Accessing the Database

You can access the Labor Rates Database by highlighting it on the Main Menu Screen and pressing Enter.

You can also access the database from the Project, Models, Assemblies, and Crews Database, by using the Lookup feature. Refer to Chapter 16 for instructions on using Lookup.

Title Level

The title level organizes the types of labor into categories by alphabetical range.

Detail Level

To view the individual labor cost items, select a title and press the Enter key.

Result: The program displays the browse mode screen.

At the detail level, you can browse through the entire list of cost items. As you move from one alphabetical range to the next, the title shown at the top of the screen changes.

You can view each item individually by highlighting it and pressing F4.

Result: An entry screen for the item is displayed, in edit mode.

The entry screen contains the same fields as the browse mode screen. Refer to Section 12.3 for a description of each field.

12.2 Labor Rate Titles

When to Use

It is unlikely you will need to add titles to the supplied database, because of its simple structure.

However, if you are building your own database, or greatly expanding the supplied database, you might want to change the title structure. GOLD allows you to add titles at Level 1, and also to define a second level of titles.

Entry Screen

The Labor Rates Database title entry screen is shown in Figure 12.1.

Figure 12.1: Title Entry Screen, Labor Rates Database

Field Descriptions

Field	Description
Labor Title ID	The database ID of the title.
Level	The title level. Identified by the program.
Name	Name assigned to the category.

12.3 Labor Rate Detail Items

When to Use

You can add or edit labor rate items as your project needs dictate.

For example, you may want to add rates to match local union and open shop pay scales. You may need to add project management personnel. Or you may want to create a separate labor category for a particular crew or task.

Detail Item Entry Screen

The entry screen for detail items is shown in Figure 12.2

Figure 12.2: Detail Item Entry Screen, Labor Rates Database

Field Descriptions

Field	Description
Labor ID	<p>Database ID of the item.</p> <p>The first 3 characters indicate the Source of the item. The program assigns USR for user-created items. Databases furnished with the program use MIL for military building construction, CIV for civil works, and other abbreviations.</p> <p>The Source is followed by an ID of up to 10 characters that uniquely identifies the item in the database and places it beneath its title.</p>
Description	The kind of laborer. You can expand the description through use of the Notes feature.
Basic Rate	Basic rate per the unit of measure in the following field.
Unit of Measure	Hours are the only valid unit of measure.
Overtime	<p>Hourly amount or percentage applied to the labor item for overtime.</p> <p>For this and the next 3 fields, you can enter either the amount or percentage and the program will compute the other.</p> <p>Note: An overtime amount or percentage is only entered here if this labor item will always be used on tasks composed of a constant ratio of straight time and overtime. Generally, this only occurs when an entire project is estimated based on a specific percentage of overtime and a Labor Rates Database is dedicated to that project. More often, overtime is applied at the level of the project task, as described in Section 6.7.</p>

Field	Description
Payroll Tax & Insurance	This amount or percentage includes Workmen's Compensation and Liability Insurance, State and Federal Unemployment Compensation, and Social Security.
Fringe Benefits	This amount or percentage includes costs for health and welfare, pension, vacation, apprentice training, and other costs as may be required by union agreements or established trade practice.
Travel or Subsistence	Amount or percentage for travel costs or subsistence as may be required.
Total Hourly Rate	Sum of the basic rate plus the preceding 4 cost fields. Computed by the program. Note: This is the standard laborer rate for the item. To arrive at the foreman and apprentice rates used in the Crews and other databases, the program adjusts the laborer rate with values entered on the Crews Database Edit Screen. See Section 9.4.
Database Default Rate	Default rate stored in the database for the item. This rate is entered at the time the database is created, and is only changed when the database is updated by the database developer. It is provided as a baseline for comparison purposes.
Last Update	The program automatically fills in the system date when the item was last changed in the database. For a new item, the date created.

Browse Mode Screen

The browse mode screen contains a subset of the fields on the detail item entry screens for each item. You can edit only the Labor Description field on the browse mode screen.

Note: Additional editing capabilities are provided if you have an Area Responsible Agency (ARA) version of the software. See the Appendix in Volume 2.

CHAPTER 13

THE EQUIPMENT RATES DATABASE

Purpose

The Equipment Rates Database stores costs for equipment, including the cost of ownership (depreciation and Facilities Capital Cost of Money) and operating costs (fuel, filters, oil and grease, repairs, tire wear and tire repair). As with the Labor Rates Database, detail cost items in the Equipment Rates Database can be copied into either the Project, Crews or Assemblies Databases.

Supplied Database

The Equipment Rates Database supplied with GOLD contains rates for over 2400 pieces of equipment. The supplied database also contains fields and index files to support the U.S. Army Corps of Engineers equipment cost calculations as defined in engineering publication EP-1110-1-8, Construction Equipment Ownership and Operating Expense Schedule. It is produced by the Walla Walla District for 12 regions and published annually.

Copies of EP 1110-1-8, Volumes 1 through 12, are available through the Superintendent of Documents or their government bookstores. For information phone (202) 783-3238, or write to the following address:

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

Using Multiple Databases

You can modify this database as needed to update equipment rates. You can also create multiple copies to adjust rates for different locations. Refer to Section 9.5 for instructions on creating multiple databases

Chapter Overview

Chapter 13 describes the structure of the supplied Equipment Rates Database and of its title and detail records. The use of the secondary Database Edit Screen included with this database is also explained.

The following sections are contained in this chapter:

- 13.1 Structure of the Database
- 13.2 Equipment Titles
- 13.3 Equipment Detail Items
- 13.4 Equipment Rates Database Edit Screens

13.1 Structure of the Database

Introduction

The Equipment Rates Database supplied with GOLD is organized into two title levels and a detail level.

Accessing the Database

You can access the Equipment Rates Database by highlighting it on the Main Menu Screen and pressing Enter.

You can also access the database from the Project, Models, Assemblies or Crews Database by using the Lookup feature. Refer to Chapter 16 for instructions on using Lookup.

Title Levels

Title Level 1 organizes the types of equipment into alphabetical ranges.

Level 2 provides a further alphabetical breakdown, with each title categorizing equipment by type.

Detail Level

To view the individual equipment cost items, select a Level 2 title and press the Enter key.

Result: The browse mode screen is displayed.

At the detail level, you can browse through the entire list of cost items. As you move from one alphabetical range to the next, the title shown at the top of the screen changes.

You can view each item individually by highlighting it and pressing F4.

Result: A primary entry screen for the item is displayed, in edit mode.

The primary entry screen contains some of the fields shown in browse mode plus additional fields. A secondary entry screen, displayed by pressing Shift+F7, contains the rest of the information for the item.

Refer to Section 13.3 for field descriptions.

13.2 Equipment Titles

Entry Screen

The Equipment title entry screen is shown in Figure 13.1.

FUNCTION
1 HELP
2 ADD
3 TITLES
4 EDIT
5 DETAIL
6 LOOKUP
7 NOTES
8 SELECT
9 MENU
10 EXIT

S Scraper, Soil Stabilizer, Splitters

Equipment Title ID : S15 Level : 2

Name : Scrapers, Conventional

Name of the equipment. Use NOTES <F7> to expand the description.

EQUIP RATES v5.27

Figure 13.1: Title Entry Screen, Equipment Rates Database

When to Use

You can use the title entry screen to change information about a current title or to add a title.

You might add titles to an Equipment Rates Database in order to create new classifications of equipment or to subdivide existing classifications. For example, you might want to add a category M for Marine Equipment, and subdivide it into Marine-Barges (MB) and Marine-Tugs (MT).

Also, if you create a new (empty) Equipment Database, you will need to add titles to create the breakdown structure.

Field Descriptions

Field	Description
Equipment Title ID	The database ID of the title. Choose an ID to place the title logically in the database. (The program places titles in alphanumeric order at the specified database level. The digits 0-9 precede alphabetic characters.)
Level	The title level. Filled in by the program.
Equipment Description	Description of the equipment.

13.3 Equipment Detail Items

How Costs Are Computed

The fields in the Equipment Rates Database store information used to compute hourly ownership (as opposed to rental) costs for construction equipment. The computations are specifically designed to support U.S. Army Corps of Engineers estimating procedures.

For the purposes of the computations, equipment costs are divided into ownership and operating costs.

- Ownership cost elements are divided into Depreciation (DEPR) and Facilities Capital Cost of Money (FCCM).
- Operating costs are subdivided into the following:
 - Fuel Expense (FUEL)
 - Filters, oil, and grease (FOG)
 - Equipment Repair (RPR)
 - Tire Wear (TIRE WEAR)
 - Tire Repair (TIRE RPR)

For each equipment item, GOLD maintains figures for each of these expenses for average operating conditions based on a 40-hour work week. Where appropriate, a second set of figures is also maintained for severe conditions. The program totals these component figures to calculate total hourly rates (both average and severe), which are called the single-shift rates. A standby rate is also computed automatically.

Working With Equipment Costs

MCACES GOLD uses data tables provided by the Army Corps of Engineers for computing equipment costs. These data tables, and instructions for their use, are published annually as engineering pamphlet, EP 1110-1-8 by the Walla Walla District of the Corps of Engineers.

The hourly equipment rates used in the pamphlet are based on equipment prices which are **three years older than the publication date of EP 1110-1-8**. For example, the 30 August 1993 pamphlet reflects equipment prices based on 1 July 1990 as the date of purchase.

When adding or editing equipment items, you enter information on both a primary and secondary detail entry screen. GOLD uses this information in combination with the Corps data tables to compute the component costs, which are displayed on the primary entry screen.

Note: When adding new items, you do not have to use the data tables. Instead, you can enter estimated unit rates in a single field (Depreciation, for example). For information on adding equipment items using the data tables see page 13-14.

Primary Entry Screen

The primary detail item entry screen is illustrated in Figure 13.2.

FUNCTION	S15 Scrapers, Conventional		
1 HELP	Equipment ID : III S15CA001 Subcat/Econ. Key : 00 60		
2 ADD	Description : SCRAPER,SELF,14-20CY,24T,PWRSHF UOM : HR		
3 TITLES		Average	Severe
4 EDIT	Depreciation (A) :	24.71	30.89
5 DETAIL	Cost of Facil Capital (B) :	7.10	7.28
6 LOOKUP	Total Ownership (C=A+B) :	31.81	38.18
7 NOTES	Fuel :	8.93	11.64
8 SELECT	FOG :	2.86	3.72
9 MENU	Equipment Repair :	20.66	27.82
10 EXIT	Tire Wear :	8.25	13.70
	Tire Repair :	1.24	2.06
	Total Operating Exp (D) :	41.94	58.93
	Single Shift Rate (C+D) :	73.75	97.11
	Standby Rate (1/2A+B) :	19.46	

Source ID of the item

NOTES **OTHER** **EQUIP RATES** v5.27

Figure 13.2: Detail Item Entry Screen, Equipment Rates Database

Field Descriptions

The first set of fields on the primary entry screen are used to identify the equipment item. The second set of fields show the equipment expenses for average and (where applicable) for severe conditions. These expenses are totaled at the bottom of the screen to show the item's total (single-shift) rates. A standby rate is also computed.

For detailed descriptions of fields and the methodology used to calculate the rates, refer to EP 1110-1-8, Chapter 2.

Field	Description
Equipment ID	<p>Consists of the following two fields:</p> <p><i>Source ID</i> - The first 3 characters indicate the Source of the item. The program assigns USR for user-created items. Databases furnished with the program use MIL for military building construction, CIV for civil works, and other abbreviations.</p> <p><i>Database ID</i> - The Source ID is followed by an ID NO. of up to 10 characters which uniquely identifies the item in the database and places it beneath its title.</p> <p>Note: If you are using the Corps of Engineers' data tables, the Database ID must conform to the following rules:</p> <ul style="list-style-type: none">• Characters 1- 3 must match the item's category as defined in EP 1110-1-8, Appendix D. See page 13-15 for using the Get From Table function to add the first 3 characters of the ID.• Characters 4 -5 are the Manufacturer ID code.• Remaining characters represent a unique ID.

Field	Description
Subcat/Econ Key	<p>These fields refer to the Army Corps of Engineers' data tables as published in EP 1110-1-8, and are only needed if you use the Corps' computation method.</p> <ul style="list-style-type: none"> The Subcategory is used in combination with the item's category to reference Appendix D of EP 1110-1-8. When adding a new item, see page 13-15. <p>Note: You must enter a subcategory that is valid for the entered category. Otherwise, the data tables will not be used. Instead, the cost fields on the screen will become accessible so you can enter the costs directly.</p> <ul style="list-style-type: none"> The Economic Key (EK) is copied from Appendix D for the item and is displayed on the screen for your information. GOLD uses the Economic Key to reference Appendix E of the EP 1110-1-8.
Description	Description of the equipment. Can be extended by using the Notes (F7) feature. Actual EP 1110-1-8 descriptions are displayed in the Notes field.
UOM	The unit of measure (time) used to calculate the equipment rate.
Depreciation (A)	The straight-line method is used to compute depreciation. Depreciation is calculated by dividing the “depreciable” value (total equipment value less estimated salvage and tire cost) by the expected economic life of the unit of equipment in hours.
Facilities Capital Cost of Money (FCCM) (B)	FCCM (Facilities Capital Cost of Money) is the cost of financing the equipment. It is computed by multiplying the cost-of-money rate (as determined by the Secretary of the Treasury) by the average value of equipment and prorating the result over the annual operating hours.
Total Ownership (C=A+B)	Sum of the ownership costs.
Fuel	Fuel is the estimated <u>hourly</u> cost of fuel per unit of equipment.

Field	Description
FOG	Cost of filters, oil, and grease. The <u>hourly</u> FOG element contains all items of cost for routine servicing. It is a computed percentage of the <u>hourly</u> fuel cost and is an <u>hourly</u> cost. Refer to EP 1110-1-8 for further definition.
Equipment Repair	The repair cost is an allowance for equipment repairs, maintenance, and major overhauls. It does not include tire costs. Repair is an <u>hourly</u> cost.
Tire Wear	Allowance for tire wear (replacement). It is an <u>hourly</u> cost.
Tire Repair	Allowance for tire repair. Computed as a percentage of the total <u>hourly</u> tire wear cost times the Labor Adjustment Factor (LAF) from Appendix B of EP 1110-1-8.
Total Operating Expense (D)	Sum of the operating costs in the five preceding fields.
Single Shift Rate (C+D)	Sum of ownership and operating costs. This is the total <u>hourly</u> rate of the equipment item as used in the Project Database or other database, for either average or severe conditions.
Standby Rate (1/2A+B)	Rate for keeping the equipment on standby for a project. Equal to 1/2 of the Depreciation cost plus the cost of FCCM/hr. In accordance with EP 1110-1-8, the estimator should verify that the standby cost will not exceed 40 hours per week per unit of equipment. Note: There is no separate standby rate for severe conditions, since the standby rate is considered to be the same regardless of conditions.

Secondary Entry Screen

The secondary entry screen (Shift+F7) is used to enter data used to compute the component equipment rates shown on the primary screen. It is also used to enter additional descriptive information about the equipment and to link the equipment item to other equipment items (attachments) or to Labor Rates Database items (which represent operators).

The secondary screen is illustrated in Figure 13.3.

FUNCTION	S15 Scrapers, Conventional SCRAPER,SELF,14-20CY,24T,PWRSHF
1 HELP	Default Rate / Updated : 73.75 05/01/92
2 ADD	Shipping Weight : 670 CWT
3 TITLES	Purchase Year : 1989
4 EDIT	List / Actual Price : 324,373 319,113
5 DETAIL	Model : 621-E
6 LOOKUP	Operators 1 and 2 :
7 NOTES	Attachments 1 and 2 :
8 SELECT	Equipment Carrier
9 MENU	Fuel Type : Diesel Off-Road None
10 EXIT	Size : 330.000 HP 0.000
	FOG Extra : 0.000
	Front Drive Trail Total
	Tire Type : A C C
	Tire Cost : 0 10,832 10,832 21,664

Shipping weight of the item in hundredweight

NOTES OTHER EQUIP RATES v5.27

Figure 13.3: Secondary Detail Item Entry Screen, Equipment Rates Database

Field Descriptions

Field	Description
Default Rate	Average-condition single-shift rate as originally supplied with the database.
Updated	The program automatically fills in the system date when the item was last changed in the database. For a new item, the date the item was created.
Shipping Weight	Shipping weight of the equipment in hundredweight.
Purchase Year	Enter year equipment is purchased. If the number is a default from the EP database table, it reflects an equipment price for a unit that was purchased 3 years previous to current database. For example, if the current database is dated 1993, the equipment price represents a purchase price based on 1 July 1990.

Field	Description
List / Actual Price	<p>List price includes the cost of the unit of equipment plus accessories, including safety features.</p> <p>Actual Price is the purchase price of the unit of equipment including delivery and any discount. If you do not know the actual price, and you are using the Corps' computation method, you can calculate an Actual Price by entering values in the Shipping Weight and List Price fields.</p>
Model	Model number of the equipment. For information purposes only; not used in calculations.
Operators 1 and 2	<p>Database IDs of 1 or 2 labor rate items in the Labor Rates Database which represent operators of this equipment.</p> <p>See "Copying of Linked Items," below.</p>
Attachments 1 and 2	<p>Database IDs of 1 or 2 other items in the Equipment Rates Database which represent attachments to this equipment.</p> <p>See "Copying of Linked Items," below.</p>
Fuel Type	<p>Type of fuel used by the operating portion of the equipment and, if applicable, the carrier portion. Choices are:</p> <ul style="list-style-type: none"> • None • Air • Gas • Electric • Diesel - On Road • Diesel - Off Road <p>In the Corps' computation method, this and the next field are used to calculate the Fuel costs shown on the primary entry screen.</p>
Fuel Size	<p>Horse power rating of the operating portion of the equipment and, if applicable, of the carrier portion. (Equipment items with a fuel type of "Air" are rated in CFM, all others in HP.)</p>

Field	Description
FOG Extra	<p>In the EP database, FOG is computed as a percentage of the hourly fuel costs. If the unit of equipment has no engine, a reasonable hourly estimate for FOG may be included.</p> <p>(FOG is an allowance for the cost of filters, oil and grease. The hourly FOG element contains all items of cost for routine servicing. See EP 1110-1-8, Chapter 2, for further definition.)</p>
Tire Type	<p>Types of tires required by the front, drive, and trailing parts of the equipment (where applicable). Tire type codes are:</p> <ul style="list-style-type: none"> A None B Bias Off-Highway E4, L4, L5 C All Other Bias Ply D Radial Off-Highway RL4 E All Other Radial <p>In the Corps' computation method, this and the next field are used to calculate the Depreciation, Equipment Repair, Tire Wear, and Tire Repair fields on the primary entry screen.</p>
Tire Cost	<p>Estimated current year cost of tires for the front tires (FT), drive tires (DT), and trailing tires (TT) as applicable. This is the <u>total</u> cost for all tires in that position (not a unit cost).</p> <p>The Total field shows the total cost of all tires and is filled in by the program.</p>

Copying of Linked Items

As discussed above, an equipment rate item can have one or two linked labor rate items and equipment rate items.

- Linked labor rate items represent operators of the equipment.
- Linked equipment rate items represent attachments to the equipment. For example, an item for a bulldozer might have a blade defined as an attachment item.

When you look up into the Equipment Rates Database and begin the process of copying an item back to another database, GOLD prompts you to specify whether any linked laborers or attachments should also be copied. If you enter Y to confirm, GOLD will automatically copy the linked items and place them beneath the same title as the equipment item you are copying.

Browse Mode Screen

The browse mode screen in the Equipment Rates Database lists some of the same fields as the detail entry screen. The following fields on the browse mode screen are accessible for editing:

- Equipment Description
- Model Number

Note: Additional editing capabilities are provided if you have an Area Responsible Agency (ARA) version of the software. See the Appendix in Volume 2.

Adding New Detail Items Using the Get from Table Function

When adding new detail items to the equipment rates database, follow the following procedure:

1. Find and highlight the most closely related item in the database. Press F2 to add a new item.

Result: The primary entry screen for a detail item is displayed. The data is shown in brown (or low-intensity on monochrome monitors). This indicates that the item represents a default copy of the item that was highlighted when you pressed F2.

2. From the Database ID field, select the Get from Table function by pressing the Alt+B key combination, or choosing Get from Table under the Tools menu.

Result: A list of tables is displayed. These tables contain information from Appendix D of the EP 1110-1-8.

3. Highlight the appropriate table and press enter.

Result: A table of information from Appendix D is displayed.

4. Using the down and up arrow keys, highlight the line appropriate for the item you are adding. (Only lines with a number in the life column will return information.) With your highlighter on the appropriate line, press the Alt+B key combination or F10.

Result: You are returned to the primary entry screen in the Add mode. The first three characters of the ID and the Subcategory field have been filled in with the appropriate data from the Appendix D.

5. Continue by pressing the End key or using your right arrow key to get to the end of the ID field. See page 13-7 for guidelines on filling out the remainder of this field and the remaining fields on this screen and the secondary entry screen.

13.4 Equipment Rates Database Edit Screens

Two Screens

Two database edit screens are available for the Equipment Rates Database.

- The primary edit screen is used to add new databases and to edit general information about a database. This includes currency exchange information.
- The secondary edit screen (Shift+F7) is used to enter additional factors that modify equipment costs in the database according to geographic region.

Using the Primary Edit Screen

The use of the primary entry screen is the same as for the other supporting database edit screens. See Section 9.4 for details.

About the Secondary Screen

The secondary Equipment Database Edit Screen (Figure 13.4) is used to store and maintain *area factors*, which modify the equipment costs in the database for each geographic region. The area factors are derived from the Army Corps of Engineers EP 1110-1-8, Appendix B.

By changing one or more of the factors on the secondary screen, you can cause GOLD to reprice all of the equipment items in the database according to the changed factor(s).

EQUIP RATES Database Edit	
Eq Rates EP 1110-1-8, Aug. 1993 Reference EP-1110-1-8, APPENDIX B	
FUNCTION	
1 HELP	
2 ADD	
3 TITLES	
4 EDIT	
5 DETAIL	
6 LOOKUP	
7 NOTES	
8 SELECT	
9 MENU	
10 EXIT	
State Sales or Import Tax Rate : 4.500%	
Working Hours Per Year (WHPY) : 1600 Database	
Labor Adjustment Factor (LAF) : 0.990 Default	
Electricity Cost Per KWH : 0.050 0.050	
Gasoline Cost Per Gallon : 1.290 1.290	
Diesel Cost Per Gallon (Off-Road) : 0.930 0.930	
Diesel Cost Per Gallon (On-Road) : 1.190 1.190	
Cost-of-Money Rate (Full Rate) : 6.500% 6.500%	
Cost-of-Money Rate (Adjusted) : 5.200% 5.200%	
FREIGHT RATES	
0 CWT thru 240 CWT : 17.100/CWT	
Over 240 CWT thru 300 CWT : 15.100/CWT	
Over 300 CWT thru 400 CWT : 12.500/CWT	
Over 400 CWT thru 500 CWT : 11.250/CWT	
Over 500 CWT thru 700 CWT : 9.650/CWT	
Over 700 CWT thru 800 CWT : 7.700/CWT	
Over 800 CWT : 7.200/CWT	
C:\GOLD530\DATA	
Tax percentage to be added to equipment prices	
OTHER	
EQUIP RATES v5.30	

Figure 13.4: Secondary Equipment Rates Database Edit Screen

Access to Screen Fields

All users can access the secondary edit screen to view the fields. However, access to changing field information is restricted as follows:

- The ARA version of the software permits access to all edit fields, including the Database Default fields.
- System Administrator versions allow edit access to all fields except the Cost-of-Money rate (Adjusted).
- Users without the System Administrator module may access the following fields only:
 - Electricity Cost per KWH
 - Gasoline Cost Per Gallon
 - Diesel Cost per Gallon (Off Road)
 - Diesel Cost per Gallon (On Road)
 - Cost of Money Rate (Full Rate)

Note: Refer to Chapter 25 for information on System Administration.

Using the Secondary Screen

Follow these steps to use the secondary edit screen. Begin on the Main Menu Screen, with the highlight on the Equipment Rates Database.

1. Press the F4 key to display the primary Database Edit Screen.
2. Press Shift+F7 to display the secondary Edit Screen.
3. View the information on the screen. If you are changing data, type your changes into the appropriate fields.

Refer to the Field Descriptions below for details.

4. When you are finished viewing or editing the screen, press the F10 (Exit Screen) key twice.

Result: If you made changes, GOLD prompts you to confirm that you want to reprice the database based on your changes.

Enter Y to confirm or N to deny.

Result: If you entered Y, the database is repriced as specified. When repricing is complete, the Main Menu Screen is redisplayed.

Field Descriptions

This table describes the fields on the secondary Equipment Database Edit Screen. The Database Default column to the right shows the original field values when the database was released. All fields are based on **EP 1110-1-8, Appendix B**. The area factors given in Appendix B are used to compute the hourly equipment rates.

Field	Description
State Sales or Import Tax Rate	Rate of tax applied to the purchase price of the equipment. Used by GOLD to figure the Actual Cost.
Working Hours per Year	Average annual operating hours for equipment. Used in the calculation of FCCM. WHPY are reduced to allow for lost time for weather, holidays, equipment maintenance, repair, mob and demob, and miscellaneous downtime.
Labor Adjustment Factor (LAF)	LAF is used to adjust the FOG factor, Repair Factor, and Tire Wear Factor. It accounts for geographic variations in labor and parts costs.
Electricity Cost Per KWH	Cost of the electricity in the region. Used in the fuel cost calculations for electrical equipment.
Gasoline Cost Per Gallon	Cost of gasoline in the area. Used in the fuel cost calculations for gasoline-driven equipment.
Diesel Cost per Gallon (Off Road)	Area cost per gallon for off-road diesel fuel.
Diesel Cost per Gallon (On Road)	Area cost per gallon for on-road diesel fuel.
Cost-of-Money Rate (Full Rate)	The cost of money rate is determined by the Secretary of the Treasury. The new rate is multiplied by the average value of equipment and the result is prorated over the annual operating hours. See EP 1110-1-8, Appendix I. This rate is used as the basis for deriving the discounted cost-of-money rate in the next field.
Cost-of-Money Rate (Adjusted)	This value is computed by the program based on the current Cost of Money entered in the previous field. Note: The cost of facilities capital (FCCM) is discounted to avoid duplication when applying estimated markups for contractor overhead and profit.

Field	Description
<u>Freight Rates per CWT</u>	<p>These fields show the average cost of shipping equipment in the region, for each weight class shown. The costs are per hundredweight (CWT).</p> <p>These rates are used in combination with the Shipping Weight field for calculating the Actual Price of each equipment item.</p>

Note: See Appendix B in the EP 1110-1-8 for the current Area Factors for your area.

CHAPTER 14

THE ASSEMBLIES DATABASE

Purpose

The Assemblies Database stores groupings of cost items representing all the costs required to create a larger piece of a project. The individual cost items within each assembly are usually copied from the Unit Price Database. However, the items may also be copied from the Labor or Equipment Rates Database, or they may be user-created.

Assemblies in turn can be copied into the Models Database, or directly into the Project Database. Using assemblies can greatly reduce the amount of data entry required to build a project.

Example of Use

An assembly representing 6-inch concrete slab on grade includes all the cost items required to prepare for, form, pour, and finish the slab. The assembly unit of measure is square feet. The Assemblies Database stores the unit costs (Labor, Equipment, Material, and Total) and quantities of each item required to construct one square foot of slab.

When you copy this assembly into the Project Database, you supply the square feet of slab needed for your estimate. GOLD then computes the total quantities and resulting costs of all items required for slab on grade construction.

Note: Refer to Section 6.9 for more information on using assemblies in a project.

Functions Like the Project Database

In terms of how the program functions, the Assemblies Database is generally equivalent to the Project Database. This design allows you to easily transfer data between the two types of databases.

This means that the fields on title and cost item entry screens are the same in the Assemblies and Project Databases. It also means that you can perform most of the same functions on a Assemblies Database as you can on a Project Database, including naming columns, setting the breakdown structure, recalculating, and repricing.

The only functions that are *not* permitted with an Assemblies Database are Indirect and Owner Costs, Contractor Records, Adjust Pricing, and project reports.

Note: The Assemblies and Project Databases also have the same design as the Models Database, which is discussed in *Volume 2, Advanced Options*.

Supplied Assemblies Database

The ASM94A Assemblies Database supplied with GOLD contains approximately 2500 separate assemblies drawn from U.S. Army Corps of Engineers data. The structure of this database is described in detail in Section 14.1.

Chapter Overview

This chapter describes the structure of the supplied Assemblies Database and of its title and detail records. The following sections are included in Chapter 14:

- 14.1 Structure of the Database
- 14.2 Assembly Titles
- 14.3 Assembly Detail Items
- 14.4 Detailless Assemblies

14.1 Structure of the Database

Introduction

This section describes the structure of the Assemblies Database supplied with GOLD.

The supplied database is designed for building construction. Other databases applicable to other types of construction, such as civil works or hazardous waste cleanup, will have similar structure and features but follow a different classification scheme.

Accessing the Database

You can access the Assemblies Database by highlighting it on the Main Menu Screen and pressing Enter.

You can also access the database from within the Project or Models Databases, by using the Lookup feature. Refer to Chapter 16 for instructions.

Building Systems Classification

The supplied Assemblies Database is broken down according to the *building systems* hierarchy used by the U.S. Army Corps of Engineers. This breakdown scheme closely follows the UNIFORMAT System developed by Hanscomb Associates, Inc., which is widely used in private and government organizations.

The building systems classification organizes construction costs according to function, such as substructure, roofing, and so on. This allows the use of data to estimate costs by function during planning and early design, before the detailed identification of materials.

This systems approach contrasts with the CSI classification scheme used in the Unit Price Database, which organizes cost items by material and labor type. The CSI approach more closely resembles the way building construction is actually purchased and accounted for by a contractor. In GOLD, the CSI approach provides detailed backup to the systems estimating method.

Title Levels

The Level 1 title list screen is displayed when you first access the Assemblies Database.

The Level 1 titles represent the 16 building systems in the original CACES classification scheme used by the Army Corps of Engineers. The first two digits of each title's database ID is also referred to as its *system code*. In addition, a 00 title has been added to accommodate assemblies that do not have a building function, such as those used to estimate contractor overhead.

Subsequent title levels (2-5) represent further breakdown of the data under each system classification.

Assembly Level

Assemblies are defined as titles at the lowest title level. In the supplied database, this is either Level 4 or 5, depending on the breakdown in different areas.

Each assembly is listed on the lowest-level title list screen, along with the total unit cost of the assembly.

Detail Level

Beneath each assembly, the individual cost items are listed at the detail level. To view the browse mode screen, highlight any assembly on the title list screen and press Enter.

The cost items are drawn from the Unit Price Database, and the data shown is the same as in that database, with the addition of the Assembly ID.

Entry screens for each item can be displayed by highlighting the item on the browse mode screen and pressing F4. Secondary entry screens are then accessed by pressing Shift+F7. Together, the primary and secondary screens include all the fields shown in browse mode, plus additional fields.

Refer to Section 14.3 for descriptions of each field on the entry screens.

14.2 Assembly Titles

Title Entry Screen

The Assemblies Database title entry screen is shown in Figure 14.1. This screen contains the same fields as the title entry screens in the Project and Models Databases. Some of the fields are not actually used in the Assemblies Database, but they are provided to make it easier to look up and copy titles into the other databases.

FUNCTION	04.1.1. Exterior Wall Construction																							
1 HELP	(Unused) ID : 001AD																							
2 ADD	(Unused) Name : Exterior Wall Construction Of 6																							
3 TITLES	(Unused) Quantity : 1.0000 SF																							
4 EDIT	Contractor : <input type="text"/>																							
5 DETAIL	Contractor Override : No																							
6 LOOKUP	Category Code : <input type="text"/>																							
7 NOTES	Cost Override : N - Sum from detail																							
8 SELECT																								
9 MENU																								
10 EXIT																								
Quantity associated with the assembly																								
<table border="1"><thead><tr><th>MANHRS</th><th>LABOR</th><th>EQUIP</th><th>MATERL</th><th>OTHER</th><th>TOTAL</th></tr></thead><tbody><tr><td>0.24</td><td>3.53</td><td>0.07</td><td>3.91</td><td>0.00</td><td>7.51</td></tr><tr><td>2.38E-001</td><td>4</td><td>6.86E-002</td><td>4</td><td>0</td><td>8</td></tr></tbody></table>							MANHRS	LABOR	EQUIP	MATERL	OTHER	TOTAL	0.24	3.53	0.07	3.91	0.00	7.51	2.38E-001	4	6.86E-002	4	0	8
MANHRS	LABOR	EQUIP	MATERL	OTHER	TOTAL																			
0.24	3.53	0.07	3.91	0.00	7.51																			
2.38E-001	4	6.86E-002	4	0	8																			
NOTES OTHER ASSEMBLIES v5.29																								

Figure 14.1: Title Entry Screen, Assemblies Database

When to Use

You use the Assemblies Database title entry screen when adding or editing assemblies or upper-level titles. Since an assembly is a grouping of detail items, assemblies are always added at the lowest title level.

Field Descriptions

The title entry screen consists of two parts. You use the fields in the top part to define the assembly or upper-level title. The ID, Name, and Quantity fields are preceded by the name of the title level as defined on the Set Breakdown Structure Screen.

The fields in the lower part show the cumulative unit costs and extended costs for all cost items grouped below the title. In the Assemblies Database, these cost fields are only meaningful for lowest-level titles representing actual assemblies. When you are defining a new assembly, the program sets these fields to 0 until cost items have been added at the detail level and the database has been recalculated.

Field	Description
ID	Database ID of the title. The range of available IDs is determined by the upper-level title, which is shown at the top of the screen. The program prompts you if you enter an ID out of range.
Name	Descriptive name of the title. On upper-level titles, standard building system and sub-system names are used. For assembly titles, the name of the assembly. The descriptive name can be expanded by using the Notes (F7) feature.
Quantity	Quantity applied to the title. In the Assemblies Database, this field is normally stored as 1. A quantity is then entered for an assembly when it is copied back to the Project or Models Database.
Unit of Measure	The unit of measure applied to the title. Refer to Appendix B for valid units.
Contractor	Default Contractor ID applied to the assembly. Not normally used for upper-level titles.
Contractor Override	Not used in the Assemblies Database.
Category Code	Not used in the Assemblies Database.
Cost Override	Not used in the Assemblies Database.

<u>Field</u>	Description
<u>Cost Fields</u>	
Manhours	Number of manhours required to perform the work defined by the assembly.
Labor	Total labor cost of the assembly.
Equipment	Total equipment cost of the assembly.
Material	Total material cost of the assembly.
Other	Reserved.
Total	Total cost. The sum of the Labor, Equipment, Material, and Other cost columns, for both the unit and extended cost rows.

14.3 Assembly Detail Items

Two Screens

In the Assemblies Database, detail items are defined on a primary and secondary entry screen. The screen fields are the same as those in the Project Database. Figure 14.2 illustrates the primary screen.

Figure 14.2: Detail Item Entry Screen, Assemblies Database

When to Use

You can use the detail item entry screens to add or edit information about a cost item in an assembly. You can add cost items to existing assemblies or to new ones you have created.

Defining the Cost Item

Adding detail items to an assembly is much the same as adding them within a Project Database. You have several options for defining the item:

- Copying from the Unit Price Database
- Copying from the Labor or Equipment Rates Database
- Creating your own cost item.

Refer to Section 6.2 for instructions on using these methods.

Field Descriptions

The primary entry screen contains the following fields for each detail item. The cost fields at the bottom of the screen show the unit and extended costs for the item. Each extended costs equals the corresponding unit cost times the item quantity.

Field	Description
Project Sequence ID	<p>The Sequence code has three possible uses. The first use is to determine the order in which items are displayed and printed. If you do not use sequence codes, the items are listed in the order in which they were entered.</p> <p>The second use is to sequence detail cost items so that when the project is brought up in the Scheduling Interface, the items will be already sequenced to produce the desired duration for the lowest title level.</p> <p>The third use is to store the Item Selection Parameter Worksheet reference code, when using Item Selection Parameter Worksheets to select detail items.</p> <p>Up to four characters are allowed.</p>
Database ID	<p>This field consists of three parts.</p> <p>The first part is a 3-character item source ID filled in by the program. All items that you define are tagged USR. Other codes from the UPB include the following:</p> <p>MIL - Building construction item. CIV - Civil works item. HTW - Hazardous waste construction item. RAD - Radioactive waste construction item. TUN - Tunneling item.</p> <p>The second and third parts of this field are each IDs of up to 5 characters used in the source database to identify the item. For user-defined items, you can enter an optional identifier here. For items copied from the Labor or Equipment Rates Database, this field is left blank.</p>

Field	Description
Description	Description of the item. May be read from the source database or entered here.
Quantity	Quantity of the item to be used in the assembly. Expressed in units defined by the Unit of Measure field.
Unit of Measure	This unlabeled field specifies the unit used to describe the quantity. See Appendix B for valid units of measure.
Contractor	Default Contractor ID associated with the item. See Section 7.3 for a listing of recommended Contractor IDs.
Work Category	<p>System code associated with this item. In the supplied Assemblies Database, GOLD fills in the system code as the default work category value, based on the building systems title structure of the supplied database.</p> <p>This enables you to produce system summary reports from projects built from these assemblies. See Section 23.16 for information on these reports.</p>
Print Notes	Not used in the Assemblies Database.

Field	Description
UPB Cost Override	<p>This field is filled in by the program. The field indicates whether the cost data for this item has been changed since the item was created in the Unit Price Database. Values are:</p> <p>Labor/Equipment - A user has modified the labor or equipment unit costs or the crew output, or has applied an override to the crew referenced by the item.</p> <p>Material - A user has modified the material unit cost.</p> <p>Both - A user has modified material data and labor, equipment, or crew data.</p> <p>None - No overrides have been made. The item still has its original database values. (Or the item is user-created).</p>
Material Price Updated	<p>Date when the material price for this cost item was last updated. For new items, the date created.</p>

Field	Description
<u>Cost Fields</u>	
Manhours	<p>Unit and extended number of manhours required to perform the specified work.</p> <p>If crews are used, GOLD calculates this figure by dividing the number of worker hours in the crew by the crew output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.) Adjusting the hourly output will therefore change this value.</p>
Labor	<p>Unit and extended labor cost associated with the item.</p> <p>If crews are used, the unit cost equals the crew's total hourly labor cost divided by the crew output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.)</p>
Equipment	<p>Unit and extended equipment cost associated with the item.</p> <p>If crews are used, the unit cost equals the crew hourly equipment cost divided by the hourly output. (The crew output equals the Hourly Output figure set on the secondary entry screen times the Crew Productivity value entered in the Crews Database.)</p>
Material	Unit and extended material cost associated with the item.
Other	Reserved
Total	Total unit and extended cost of the item. The sum of the Labor, Equipment, and Material costs.

Secondary Entry Screen

The secondary cost item entry screen is shown in Figure 14.3. This is the same secondary entry screen used to add cost items in the Project Database. The field descriptions are repeated below for your convenience.

FUNCTION	04.1.1.001AD Exterior Wall Construction Of 6					
1 HELP	Project Seq/Database ID : <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>					
2 ADD	Description : <input type="text"/> Building Exterior, 1 To 5 Story					
3 TITLES	Building Exterior, 1 To 5 Story					
4 EDIT	Crew <input type="text"/> ID : <input type="text"/> ACARH					
5 DETAIL	Hourly Output : <input type="text"/> 185.0000 SF					
6 LOOKUP	Unit Weight : <input type="text"/> 0.0000					
7 NOTES	Unit Volume : <input type="text"/> 0.0000					
8 SELECT	Equiv Shipping Weight: <input type="text"/> 0.0000 KG					
9 MENU	TOTAL					
10 EXIT	0.53					
	1.52E-002 2.99E-001 4.51E-003 1.91E-001 0 4.94E-001					
Crew, or labor or equipment rate type. <F8> to see choices.						
<input type="text"/> OTHER <input type="text"/> ASSEMBLIES v5.30						

Figure 14.3: Secondary Detail Item Entry Screen, Assemblies Database

Field Descriptions

Field	Description
<u>Database Reference Fields</u>	
Item Type	<p>This unlabeled field identifies the source database for the item and type of rate used. Codes are:</p> <p>C - Crew. The item references a crew in the Crews Database for labor and equipment cost information.</p> <p>E - Equipment (Average). The item is copied directly from the Equipment Rates Database and the unit rate for average conditions is applied.</p> <p>S - Severe Equipment. The item is copied directly from the Equipment Rates Database and the unit rate for severe conditions is used.</p> <p>U - Unused/Standby. The item is copied directly from the Equipment Rates Database and the standby unit rate is used.</p> <p>L - Laborer. The item is copied directly from the Labor Rates Database and uses the laborer unit rate.</p> <p>A - Apprentice. The item is copied directly from the Labor Rates Database and the apprentice rate is used.</p> <p>F - Foreman. The item is copied directly from the Labor Rates Database and the foreman rate is used.</p> <p>Note: Foreman and apprentice rates are computed as adjustments to the laborer rate. These adjustments are defined on the Crews Database Edit Screen. See Section 9.4.</p>
ID	ID of the item in the referenced database.

Field	Description
Hourly Output	Used only if the item type is Crew. The crew's estimated output per the unit of measure associated with the cost item. The program displays the default value from the Crews Database, but allows you to change the number.
<u>Shipping Fields</u>	
Unit Weight	Weight per unit of measure for the cost item.
Unit Volume	Volume per unit of measure.
Equivalent Shipping Weight	Calculated by the program based on the unit weight and unit volume. See Section 6.8 for details.

Browse Mode Screen

Limited editing capabilities for cost items are provided in browse mode, without accessing entry screens.

To edit a cost item in browse mode, simply type over the entry at the cursor and press the Enter key. You can edit the following fields:

- Sequence ID
- Cost Item Description
- Work Category
- Output
- Manhours
- Labor
- Equipment
- Material

Note: Additional editing capabilities are provided if you have an Area Responsible Agency (ARA) version of the software. See the Appendix in Volume 2.

See Volume II, Section 1.2, Quantity Link Functions, for modifying and creating new assemblies.

14.4 Detailless Assemblies

Definition

Detailless assemblies are assemblies in a GOLD Project or Models Database that do not contain detail items. Instead a single title record defines the assembly in the Project Database, with the detail quantities and costs referenced from a corresponding assembly in the Assemblies Database.

Purpose

The main purpose of detailless assemblies is to save space in Project and Models Databases. Instead of needing to store large numbers of detail items, you can now build projects and models using only title records.

Cost Override Field

You create a detailless assembly in a Project or Models Database through the use of the Cost Override field on title entry screens. This field is now a multiple-choice field with three options:

- N - Sum from Detail. Do not enter a cost override at this title.
- Y - Override Pricing Here. Using this method allows you to enter a unit cost for each direct cost column. The system will multiply the quantity on the title times the user-entered unit costs to calculate the total cost for this title. Any details or subtitles below this title will be ignored.
- A - Use Assemblies Database. Using this method, the costs are computed from the details in the assemblies database.

In order to use the Detailless Assembly feature, you must assign a valid assembly ID from the Assemblies Database, as shown in the following procedure.

Adding a Detailless Assembly

Use this procedure to add a title using a detailless assembly to a Project or Models Database.

1. Access the title entry screen for the assembly in add mode. Enter the ID for the title.
2. Move the cursor to the Cost Override field and choose option A (Use Assemblies Database).
3. Use the Lookup function to look up and copy an assembly from the lowest title level of the Assemblies Database.

Result: GOLD copies the costs from the assembly. A message is displayed when the copy process is complete.

4. Press the F10 key

Result: GOLD enters the assembly name into the Name field and assembly costs into the cost fields on the title entry screen.

5. Enter the correct quantity value in the Quantity field.

Result: GOLD recomputes the cost fields based on the entered quantity.

6. Press the F10 key to exit and save.

Recomputing a Detailless Assembly

Changing the quantity on the assembly will cause GOLD to change the values for the corresponding assembly in the Assemblies Database, and to recompute the quantities and costs in your Project (or Models) Database accordingly.

Note: Each time you adjust your detailless assembly values, the values and costs for the corresponding assembly in the Assemblies Database are actually overwritten. Therefore, if you want to save the default values in the Assemblies Database, you should first create a work area in that database and copy in those assemblies you need to use. Then use this work area for all Lookup and copy operations from other databases which involve detailless assemblies.

CHAPTER 15

THE ADD/EDIT MENU

Purpose

The Add/Edit Menu provides adding and editing functions for detail and title levels in a database.

Accessing the Menu

You can access this function menu at any time within a database by pressing the F9 key. If the Add/Edit Menu is not immediately displayed from the menu bar, press the A key to access it.

The menu is displayed in pulldown fashion, as illustrated in Figure 15.1.

Refer to Section 3.7 for general information about the function menus.

Figure 15.1: The Add/Edit Menu

Chapter Overview

This chapter explains when and how to use each option on the Add/Edit Menu.

Note: In section titles, the name of each option is shown along with the speed key or key combination you can use to access the function without displaying the menu.

15.1 Edit Item - F4 Key

Choosing the Edit Item option has the same effect as pressing the F4 key while working in a database. It displays an entry screen, in edit mode, for the currently highlighted title or detail item.

When you have finished editing the item, you press the F10 key to save your changes.

15.2 Edit / View Notes - F7 Key

Purpose

The Notes feature provides a way to attach additional information to database items.

When to Use

You can use the Notes feature whenever 7 NOTES is displayed in bright white in the action key window.

Exception: Notes cannot be attached to the Project Information Record within a project, due to memory constraints. Project-level Notes are instead attached to the Description field on the Report Title Page Screen. See Section 23.5.

Notes View

Pressing the F7 key from a list screen accesses a Note window in view mode. In this mode, you can read the Notes but not make changes.

Size of Notes

The program allows up to 7,000 characters per Notes window or approximately 80 lines.

Exception: For project Notes entered from the Report Titles Page Screen, up to 20,000 characters (over 300 lines) are allowed.

How to Use

To edit notes, first press the F4 key to access edit mode. Then press F7 to access the Notes feature.

Result: A Notes window opens on the screen and the cursor is placed at the top left corner of the window.

Type in the Note information. When you are finished, press F7 again to exit.

Special Keys

While working in a Notes window, you can use the following special keys.

Key(s)	Purpose
Ctrl+B	Rejustifies the current paragraph, deleting any extra line breaks
Home	Moves the cursor to the beginning of the current line
Insert	Switches between text insert mode (indicated by a block cursor) and text overwrite mode (indicated by a line cursor.)
Ctrl+Left Arrow	Moves the cursor to the beginning of the previous word.
Ctrl+Right Arrow	Moves the cursor to the beginning of the next word within the same field.
Ctrl+Y	Line erase. Deletes all characters on the line including and to the right of the cursor.

Printing Notes

You determine whether or not Notes are printed on project reports.

- For Notes attached to cost items, you make the determination by entering Y or N in the Print Notes field on the primary entry screen for the item, as well as by making the selection on the Detail Report Formatting screen. See Sections 6.2 and Section 23.3.
- For Notes attached to titles, you make the selection on the Detail Report Formatting Screen. Refer to Section 23.3 for instructions.

15.3 Edit Owner - Alt+W Keys

This function accesses an Owner Cost screen for entering Owner Cost information in a Project Database. Edit Owner is available only from title entry screens at the lowest title level and default Owner Cost level in the Project Database.

Refer to Sections 7.6 and 7.7 for information on entering Owner Costs.

15.4 Edit Other - Shift+F7 Keys

The Edit Other function is used from a primary entry screen to display a secondary entry screen. Secondary screens are used to add or edit additional information about a title or detail item.

When you have finished filling in the secondary entry screen, you press the F10 key to return to the primary screen.

An indicator on the status line at the bottom of the screen tells you when the Edit Other function is available.

15.5 Add Item - F2 Key

Choosing the Add Item function is the same as pressing the F2 key while working in a database. It displays an entry screen, in add mode, for the currently highlighted title or detail item.

When you have finished filling in the entry screen, you press the F10 key to save your changes.

15.6 Add Subtitle - Shift+F3 Keys

This option is used to add titles at the level below the current title level. It is only available from a titles list screen, when there are no detail items below the currently highlighted title.

15.7 Add Detail - Shift+F5 Keys

Add Detail is used from a title list screen to add detail items below the highlighted title. Choosing this option accesses an entry screen for the detail item, in add mode.

You cannot add detail items below a title that has lower-level titles beneath it.

15.8 Select From List - F8 Key

Multiple-Choice Fields

Some fields on entry screens allow a limited number of valid entries. These are termed *multiple-choice fields*.

Purpose

By choosing the Select From List function, or pressing the F8 key, you display a small window listing the valid entries for the current multiple-choice field.

You can then move the highlight within the window to make your selection and press the Enter key to enter it into the field.

When to Use

This function is available whenever 8 SELECT is highlighted in the action key window.

Alternate Method

With the cursor in a multiple-choice field, you can also press the Space Bar to display the valid choices one at a time within the field.

15.9 Resize Browse - Ctrl+F5 Keys

Purpose

This function is available from browse mode screens (detail-level list screens) to show more of the detail data.

Normal View

In normal view, browse mode screens include the action key window on the left and a titles window at the top. You use the Tab key or Arrow keys to move through the fields and scroll over to information that is out of view.

Resizing

By using the Resize Browse function, you can expand the window showing the detail data by removing first the action key window, then the titles window, then both windows. Resizing a fourth time restores the normal browse mode view.

15.10 Screen Restore - Alt+U Keys

This option cancels any changes you have made on an edit screen and restores the original data.

This function is available at any time before you save edit changes by pressing F10.

15.11 Field Undo - Ctrl+U Keys

The Field Undo function cancels the last change you made to a field on an entry screen. The data that was in the field prior to the last change is restored.

Caution: If the field has been changed several times, the restored data might not be the original. To restore the original field data, use Field Restore, explained below.

15.12 Field Restore - Alt+R Keys

Field Restore cancels all changes made to the current field since the entry screen was displayed. It restores the original data to the field.

CHAPTER 16

THE LOOKUP MENU

Purpose

The Lookup Menu allows you to look up and retrieve information in another database.

Unavailable Options

The first seven options on the Lookup Menu represent databases you can select for searching. However, you can only use Lookup to search from certain databases to certain other databases. Therefore, not every option listed on the menu is available at any one time.

Unavailable options are shaded on the menu.

Accessing the Menu

You can access the Lookup Menu any time 6 LOOKUP is shown in bright white in the action key window. Press the F6 key.

Result: The Lookup Menu is displayed, as shown in Figure 16.1.

Refer to Section 3.7 for general information about the function menus.

Figure 16.1: The Lookup Menu

Chapter Overview

This chapter presents generic instructions for using Lookup. It also describes each option on the Lookup Menu and when that option can be used.

16.1 Using Lookup

When to Use

You can use the Lookup feature any time you are working in a database and 6 LOOKUP is displayed in bright white in the action key window.

Which databases you can look into depends on which database you are currently working in. Refer to Section 16.2 for details.

Changing a Database While Looking Up

Once you have accessed another database using Lookup, you can work in that database just as if you had accessed it from the Main Menu Screen.

This means that you can add or edit items or titles in the database. The new or modified data can then be copied to the original database, just like any other data.

Multiple Lookups

You can also look up into one database, then look up into another from that database.

For example, you can start by looking up from the Project Database to find a cost item in the Unit Price Database. To find crew information about the cost item, you might then look up into the Crews Database. When you are ready to return, GOLD will take you back first to the Unit Price Database. From there, you can end the Lookup and return to the Project Database.

Retrieving Detail Items

When you look up detail items in add mode, you can mark multiple items and copy them back as additions to the database. You can mark multiple items either with the Mark function (Shift+F9 keys) or by entering quantity values for the items.

When you look up from edit mode, you can only copy a single item, which replaces the item you were editing.

Retrieving Titles

When working in the Project and Assemblies Databases, you can also retrieve title elements (titles with all of their subordinate subtitles and detail items).

- From the Project Database, you can look up and retrieve elements from the lowest title levels of the Assemblies and Crews Databases.
- From the Assemblies Database, you can look up and copy titles from the lowest title level of the Project Database.

Note: Lookup options for the Models Database are discussed in *Volume 2, Advanced Functions*.

Looking Up in Add and Edit Modes

When you look up from the detail or title levels, what data you can retrieve depends on whether you start in add or edit mode.

Add Mode

- When you look up detail items in add mode, you can mark multiple items and bring them back as additions to the database.
- When you look up a title in add mode, you can only bring back a single title element.

Edit Mode

- When you look up detail items in edit mode, you can only retrieve a single detail item as a replacement for the item you are editing.
- When you look up a Crews Database title in edit mode, you can bring back that title's detail items (crew members) as additions to the detail items already in place under the title you are editing.

Procedure

Follow these instructions to look up detail items or titles in a database. For detail items, begin on a detail item entry screen. For titles, begin on a title entry screen at the lowest title level.

Note: See Section 6.3 for specific instructions about looking up from the Project Database.

1. Press the F6 key.

Result: The Lookup Menu is displayed.

2. Move the highlight to the option for the database you want to look into. (Unavailable options are shaded.) Then press the Enter key.

Result: The program accesses the appropriate database and displays a title or detail-item list screen. (For detail items and Crews Database titles, the exact screen displayed depends on the database ID entered on the entry screen you started the lookup from. Otherwise, the Level 1 title list screen is displayed.)

3. If the item or title you want is not already displayed, search through the database by selecting titles and pressing the Enter key until finding and highlighting the data you want on the appropriate list screen.
4. If you started in add mode and you want to retrieve multiple detail items, you can do one of the following:
 - Mark the items on the list screen by pressing Shift+F9, *or*
 - Select each item by entering a value in the Quantity field on the detail-list screen.
5. Press the F6 key and then the Enter key. Or, you can press Alt+L (Confirm Lookup).

Result: GOLD returns to the original database and displays the retrieved item or title in an entry screen. If you were in add mode and selected multiple items, the entry screen for the last retrieved item is displayed.

Note: To exit Lookup and return to the original database *without* retrieving any data, press Shift+F10 (Exit Database) or choose Abandon Lookup from the Menu.

16.2 Lookup Menu Options

Introduction

This section describes each function on the Lookup Menu and when it can be used.

Note: The name of each option is shown along with the speed key combination you can use to access the function. The speed key combinations take you directly to the chosen database, without displaying the Lookup Menu.

Unit Prices - Shift+F6 Keys

This function is used to look up into the Unit Price Database. You can look up and retrieve cost items in this database starting from the Project or Assemblies Database.

When retrieving cost items to another database, you can edit the Quantity field in the Unit Price Database to specify the quantity of a particular cost item to be retrieved. The quantity you enter will then appear in the Quantity field in the database to which the item is copied. You can also use this procedure to mark multiple items.

Assemblies - Alt+F6 Keys

Use this function to look up and retrieve assemblies from the Assemblies Database.

You can retrieve assemblies to the Project Database. You must be at the lowest title level when you begin. The assembly becomes a title in the project, and its detail items become cost items beneath that title.

Models - Ctrl+F6 Keys

This function is used to look up into the optional Models Database. Refer *Volume 2, Advanced Options*, for instructions.

Labor Rates - Shift+F8 Keys

Use this option to look up and retrieve labor rate items. These items can be retrieved as individual cost items to the Crews, Assemblies, and Project Databases.

Equipment - Alt+F8 Keys

Use this option to look up and retrieve equipment rate items from the Equipment Rates Database. These items can be retrieved as individual cost items to the Crews, Assemblies, and Project Databases.

Crews - Ctrl+F8 Keys

This option is used to look up and retrieve information from the Crews Database. Crews can provide labor and equipment price information for cost items in the Project, Assemblies, and Unit Price Databases. Crew compositions can also be retrieved to the lowest title level in the Project Database.

- Looking up a crew from the detail item entry screen brings back the labor and equipment cost data for the crew.
- Looking up a crew from the title entry screen in the Project Database brings back the crew composition (crew as an assembly).

Project - Ctrl+L Keys

This option is used to look up into the Project Database from the Assemblies Database. It allows you to copy a project element (title plus detail items) from the lowest title level of the project into the Assemblies Database.

Abandon Lookup - Shift+F10 Keys

This function is also available only during a lookup. It abandons the lookup operation and returns you to the previous database without copying back any data.

Confirm Lookup - Alt+L Keys

This function is available only during a lookup. Choosing this function completes the lookup, returns you to the previous database, and copies back the currently highlighted data (plus any other data you have marked, if working with detail).

CHAPTER 17

THE GO TO MENU

Purpose

The Go To Menu provides special functions for navigating and searching through a database. Most of these functions are meant to move you from point to point in a database without requiring a lot of keystrokes.

Accessing the Menu

You can access the Go To Menu at any time within a database by pressing the F9 key, followed by the G key.

Result: The menu is displayed from the menu bar, as illustrated in Figure 17.1.

Refer to Section 3.7 for general information about the function menus.

Figure 17.1: The Go To Menu

Chapter Overview

This chapter explains the purpose of and how to use each option on the Go To Menu.

Note: In section titles, the name of each option is shown along with the speed key or key combination you can use to access the function without displaying the menu.

17.1 List Titles - F3 Key

This function has the same effect as pressing the F3 key.

From a browse mode screen or detail item entry screen, it displays the title list screen for the title level immediately above the current detail items. From a title list screen, this function simply redisplay the current screen.

17.2 Browse Detail - F5 Key

This option is equivalent to pressing the F5 key. It takes you from any title list screen directly to a browse mode screen. The first detail item listed is the first one beneath the first of the titles that was displayed.

17.3 Find Keyword - Alt+F7 Keys

Purpose

The Find Keyword function is a quick method of finding a particular item in a database. Rather than searching through the hierarchy of titles and detail items, you can direct the program to search for a specific database ID or set of alphabetical characters.

This function will find words and combinations of words regardless of minor spelling differences or the order of the words.

Search for Titles or Detail Items

This function will search for either database titles or detail items.

To search for titles, begin at a title list screen. To search for detail items, begin at a detail item list screen (browse mode screen).

Procedure

Follow these steps to use the Find Keyword feature.

1. From a title list screen or detail item list screen, press the Alt+F7 keys or choose Find Keyword from the menu.

Result: A window opens on the screen. The window contains fields where you can type in an ID and/or description.

2. Enter a database ID in the Match ID field, or an alphabetic description of the item in the Description field, or both.

Note: The alphabetical description need not be an exact match. GOLD will search for and retrieve approximate matches.

3. After typing in your entry, press the Page Down key (or the Enter key from the Description field).

Result: GOLD searches the database and displays a window listing close matches to your entry.

4. Move the highlight to select an item from the list, then press the Enter key.

Result: The program displays a list screen for the title or detail item that you selected.

17.4 2nd View - Ctrl+S Keys

This function is used as part of the 2nd View capability, a component of the optional System Toolkit.

2nd View enables you to produce project comparison reports and also to sort project costs according to an alternative breakdown structure. Refer to Chapter 8 in *Volume 2, Advanced Options*, for details.

17.5 Exit Screen - F10 Key

The Exit Screen function exits the current screen and takes you back one level in the program. The next screen displayed depends on where you are in the program.

If the current screen is...	Then Exit Screen...
a database entry screen	confirms any data entered and displays the title or detail list screen.
a browse mode screen	displays the title list screen.
a titles list screen	displays the next highest level title list screen.
a Level 1 list screen	exits the database and returns to the Main Menu Screen.
a function menu	removes the menu and moves the highlight back to the current database screen.
a database menu	removes the menu and moves the highlight to the database window.
an entry screen from a database menu	confirms any data, exits the screen, and displays the Main Menu Screen.
the Main Menu Screen	displays the DOS Menu with the Quit option highlighted.

17.6 Exit Database - Shift+F10 Keys

From anywhere in a database, this option exits the database and returns you to the Main Menu Screen.

Exception: If you entered the database using the Lookup feature, Exit Database returns you to the original database. No items are retrieved.

17.7 Top of Database - Alt+F10 Keys

Choosing this option takes you to the highest title level (Level 1) of the current database.

This function is especially useful when you are searching for items under different titles, since it saves keystrokes in returning to the highest level of the hierarchy.

17.8 Down a Level - Ctrl+F10 Keys

This function is used from an entry screen to display the list screen for titles or detail items at the next lowest level.

This option is particularly useful when you are at an entry screen for an assembly and need to see the list of items contained in the assembly.

17.9 Previous Element - Ctrl+Page Up Keys

This function is used from browse mode screens. It displays the browse mode screen for the detail items under the previous title in the database.

This option is used in the Project, Models, Assemblies, and Crews Databases. (The other databases let you scroll continuously through the list of detail items in browse mode, and the titles are changed while scrolling.)

17.10 Next Element - Ctrl+Page Down Keys

Like the Previous Element function, this option is used on browse mode screens. It displays the browse mode screen for the detail items under the next title in the sequence.

This option is used only in the Project, Models, Assemblies, and Crews Databases.

CHAPTER 18

THE MARK MENU

Purpose

The Mark Menu gives you a set of options for selecting items or titles in a database. You can then move, copy, or delete the marked data in the database. You can also merge data from or extract data to another database of the same type.

Accessing the Menu

You can access the Mark Menu at any time within a database by pressing the F9 key, followed by the M key. The menu is illustrated in Figure 18.1.

Refer to Section 3.7 for general information about the function menus.

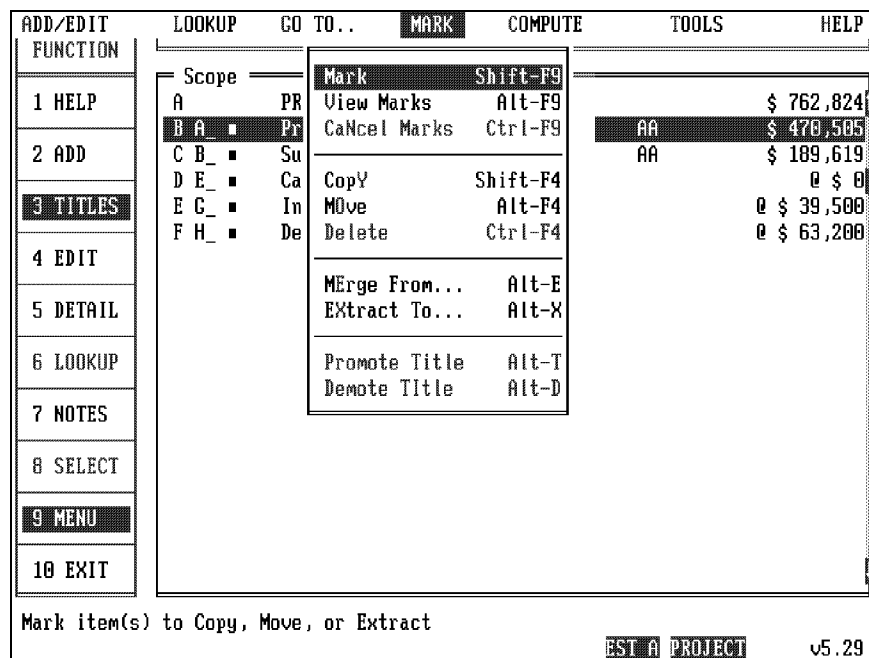


Figure 18.1: The Mark Menu

Chapter Overview

This chapter explains each option on the Mark Menu, including its purpose and how it is used.

Note: The name of each option is shown along with its speed key combination, which you can use to access the function without displaying the menu.

18.1 Mark - Shift+F9 Keys

Purpose

Use the Mark function to select one or more items in a database. You select items when you want to retrieve them during Lookup, or perform one of the other operations that are described in this chapter.

Description

You can mark titles or detail items in a database. But you can only mark at one level at a time.

When you mark an item, a small check mark is displayed on the left of the item. Marked items continue to accumulate until you perform some function on them.

Canceling a Mark

To cancel the marking of a title or item, highlight it and press Shift+F9 a second time.

18.2 View Marks - Alt+F9 Keys

This function displays a list of all the items or titles currently marked. Press the Esc key to dismiss the list.

18.3 Cancel Marks - Ctrl+F9 Keys

This option allows you to remove the marks from all marked items or titles at once. The program prompts you to confirm the action.

18.4 Copy - Shift+F4 Keys

Purpose

The Copy function is used to copy titles and/or detail items within a database. The copied titles or items remain in their original location (called the *source*) and duplicates are placed in the new location (called the *destination*).

What Can Be Copied

What can be copied depends on the database.

- In the Project, Models and Assemblies Databases, you can copy detail items or titles at any level. Copying a title automatically copies the entire *element* (that is, all subtitles and detail items).

Note: You can only mark and copy from one level at a time.

- In the Crews Database, you can copy only from the lowest title level. That is, you can copy crews, along with their detail items. You cannot copy upper-level titles or individual detail items in this database.

Specifying the Destination for Titles

When you copy titles, you must specify the database ID for each copied title in its new location. This requires two steps:

1. You display the title list screen and then highlight the appropriate title at the level above where you want the title element copied. This upper-level title is called the *parent*.
2. After highlighting the parent title, you access the Copy function and complete the database ID for the copied title.

Refer to the Example below for an illustration.

Specifying the Destination for Detail Items

When you copy individual detail items (in the Project or Models Database) you specify the destination by simply highlighting the parent title (at the lowest title level) on the appropriate title list screen.

The program then copies all the marked detail items to the location below that parent title.

Procedure

Use these instructions to copy portions of a database.

1. Display the list screen for the titles or detail items that you want to copy.
2. Use the Mark function (Shift+F9) to mark one or more titles or detail items.

Note: You can only mark at one database level at a time.

3. After marking all titles or items, display the title list screen for the title below which you want the data copied. Highlight the parent title for the copied data on this screen.
4. Press Shift+F4.

Result: A window is displayed and you are prompted to complete the database ID of the copied item or title.

5. If you want to accept the default database ID displayed in the field, press Enter.

If you want to specify a different database ID, type the new ID, then press Enter.

Results:

- If you have marked a single title, or detail item, it is copied to the specified destination.
- If you have marked multiple detail items, all the marked items are copied.
- If you have marked multiple titles, the first is copied. You are then prompted to specify the database ID for the next marked title. Repeat Steps 5 through 7 for each title element to be copied.

Example

You want to copy project element 0102 and place the duplicate beneath the Level 1 title 03. Title 03 already has three subtitles (0301, 0302, 0303), so you want to number the copied title element as 0304.

1. After marking title 0102, you display the Level 1 title list screen. You highlight the parent title 03 and press Shift+F4.

Result: A window is displayed prompting you to specify the database ID of the copied title. The parent ID 03 is filled in as the first part of the ID. The Level 2 ID segment of the source title (02) is filled in as the default for the second part.

2. You can now change the second part (the source Level 2 segment) or accept the default.
 - If you accept the default, the data below title 0102 will be copied below the existing title 0302. GOLD will ask the question: “Copy to Existing Element? (Y/N) N”. If you input Y, the title description for the previous 0302 is replaced with the title of 0102.
 - Instead, you complete the database ID by typing 04 in the second (accessible) part of the field. The entire 0102 element is then copied, and the duplicate data becomes element 0304.

Complications of Copying Elements

As noted above, within a Project or Models Database, you can copy elements from any database level to any other level. This flexibility has advantages in terms of building projects or models. However, it can lead to the following complications:

- Loss of titles
- Renumbering of subtitles

Loss of Titles

If you copy from an upper to a lower level, you may lose titles at the bottom.

For example, if you copy an entire project element from Level 2 in one part of the database to Level 5 in another part, you have only two levels (5 and 6) available for placing up to five levels of titles (2 - 6).

When this happens, the lower-level titles are eliminated. However, the detail items beneath these titles are copied. They are simply grouped in larger categories (that is, under their higher-level titles) at the destination.

Renumbering of Subtitles

For the Project and Models Databases, the length of the database ID segment representing each title level is set through the Set Breakdown Structure option on the Prepare Menu. (See Section 5.5).

If you copy from a title level with more characters in its ID length to one with fewer characters, the program is unable to fit the larger ID segment in at the destination. The titles must be renumbered so that their IDs fit at all levels.

- For titles at the level you are copying, you can renumber the titles (as in the Example above).
- Any subtitles in the element being copied are automatically renumbered by the program.

18.5 Move - Alt+F4 Keys

Purpose

The Move function is used to move titles or detail items from one part of a database to another part.

Move vs. Copy

The only difference between the Move and Copy functions is that, whereas Copy duplicates items or tiles, Move deletes them from the source and places them at the destination. (Actually, items or titles that are moved are *marked* for deletion at the source, just as if you had used the Delete function on them. See Section 18.6.)

Otherwise, Copy and Move work exactly the same. All the rules and procedures governing Copy also apply to the Move function. Refer to the previous section for details and instructions.

18.6 Delete - Ctrl+F4 Keys

Purpose

This option is used to select one or more items or titles to be deleted from a database.

Effect of Deleting

When you delete items or titles, they are flagged with a DEL label but remain displayed on the screen. The records are still stored in the database, but they are not included in any calculations.

To permanently remove deleted items from a database, you must use the Pack a Database option on the Services Menu.

Canceling Deletion

Since deleted items are not permanently removed from the database until the database is packed, you can cancel the deletion. Simply highlight the deleted item and press Ctrl+F4 again.

18.7 Merge From - Alt+E Keys

Purpose

The Merge From function is used to merge an entire database of the same type with the current database.

You can use this function to merge databases of any type, including Project Databases.

Contractor records in the source Project database will not be merged into the target Project database.

Source and Target Databases

The database you merge is referred to as the *source*, and the current database that is merged to is called the *target*.

Data from the source is added to the target.

Duplicate IDs

If GOLD finds items or titles with the same database IDs in the source and target databases, the data in the target database is *not* overwritten. This means that the item or title from the source is not added to the target, except in cases where duplicate IDs are allowed.

Duplicate IDs are allowed only for detail items in the Project, Models, Assemblies, and Crews Databases. They are not allowed for detail items in the other databases, and they are not allowed for titles in any database.

However, if a title is not merged because it has a duplicate ID, that title's subtitles and detail items can still be merged.

- Subtitles are still merged if they do not themselves have duplicate IDs.
- Detail items are still merged if they do not themselves have duplicate IDs or if it is a database type where duplicate IDs are allowed for detail items.

Loss and Renumbering of Titles

If the target database has more title levels than the source, the lower-level titles in the source are not merged. However, the detail items belonging to these titles are merged. They are simply grouped under the higher-level titles in the target database.

Similarly, if titles in the source database have longer database ID lengths at one or more levels than the titles in the target database, these titles are renumbered so that their IDs fit in the target database at all levels.

Procedure

Use this procedure to Merge two databases of the same type. Begin at any list or entry screen in the target database.

1. Using Copy a Database from the Services menu, make a copy of the target database before using the Merge procedure (you cannot Undo a Merge).
2. Press Alt+E or select the Merge From option on the Mark Menu.

Result: A window is displayed and you are prompted to enter the path and ID of the source database.

3. Type the path designation if different from the current path. Type the ID of the source database to be merged, then press the Enter key.

Result: The source database is merged with the current database. GOLD displays a message informing you when the processing is complete.

18.8 Extract To - Alt+X Keys

Purpose

The Extract To option creates a new database of the same type as the current database, and then copies to the new database any items or title elements you have marked.

Description

You can mark and then extract items or titles at any level. Extracting a title automatically extracts the entire element (that is, all of the title's subtitles and detail items). Extracted data is not removed from its source location, but is duplicated in the new database.

This function can be used on databases of any type.

Use With the Merge Function

You can use the Extract function in combination with the Merge function to copy any group of elements or items from one database to another database of the same type.

- First, mark and then extract the titles or items you want to copy. This operation places them in their own database, which you can treat as a temporary database.
- Then, use the Merge function to merge the temporary database with the one you want the data copied to. See Section 18.7 for instructions.

Default ID

When you extract data, you are prompted to enter the database ID of the new database to be created. The default ID is the first five characters of the current database, preceded by an underscore character.

Examples: _DEMAI, _MILEX

This notation is recommended so that extracted databases are immediately apparent in a list of database IDs, and also so that their original source database is indicated.

Procedure

Use these instructions to extract portions of a database and place them in a new database.

1. Use the Mark function (Shift+F9) to mark the items or titles to be extracted.

Note: You can only mark at one database level at a time.

2. After marking all titles or items, press Alt+X or select the Extract To option on the Mark Menu.

Result: A window is displayed and you are prompted to enter the path and database ID of the database to be created.

3. If you want to accept the default ID, press Enter.

Otherwise, type the new path and/or ID, then press Enter.

Result: The new database is created and the data you have marked is copied. The program displays a message informing you when the processing is complete.

18.9 Promote Title - Alt+T Keys

This function is used to promote a title element (a title plus its subtitles and detail items) in a Unit Price Database. Promote Title is part of the System Toolkit and is discussed in *Volume 2, Advanced Options*.

18.10 Demote Title - Alt+D Keys

Demote Title is used to lower a title element one level in a Unit Price Database. This option is also described in Volume 2.

CHAPTER 19

THE COMPUTE MENU

Purpose

The Compute Menu provides various calculation and repricing functions that you can apply to the Project Database and supporting databases.

Accessing the Menu

You can access the Compute Menu at any time within a database by pressing the F9 key, followed by the C key. The menu is illustrated in Figure 19.1.

Refer to Section 3.7 for general information about the function menus.

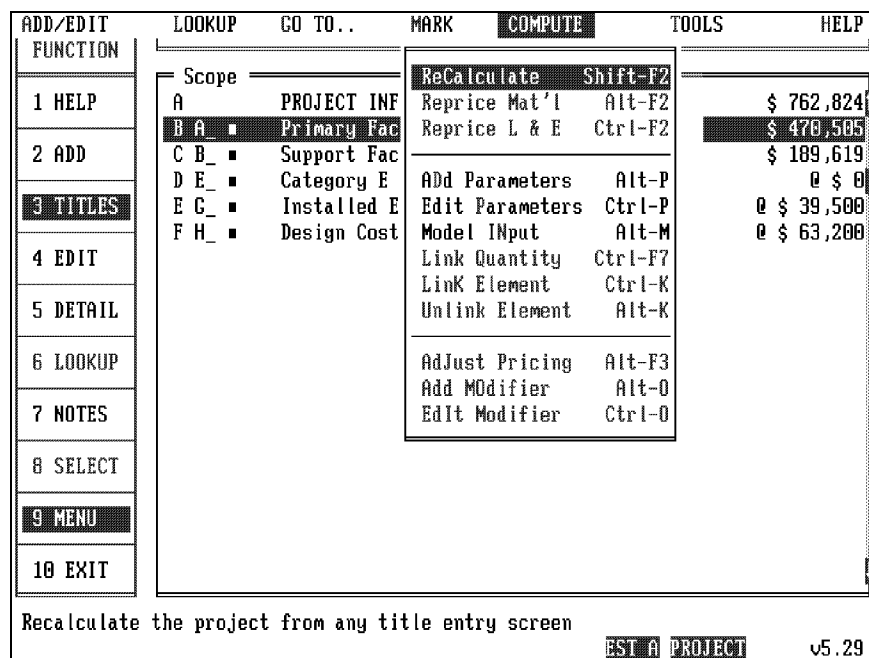


Figure 19.1: The Compute Menu

Chapter Overview

This chapter explains the options on the Compute Menu and when they should be used.

Note: The name of each option is shown along with its speed key combination, which you can use to access the function without displaying the menu.

Modeling Options

The following options on the Compute Menu are used with the optional Models Module:

- Add Parameters
- Edit Parameters
- Model Input
- Link Element
- Unlink Element

These options, along with the use of the other Compute Menu options with the Models Database, are described in *Volume 2, Advanced Options*.

19.1 Recalculate - Shift+F2 Keys

Purpose

This function is used to recalculate all or part of a Project Database. GOLD does not automatically recalculate summary costs whenever you add or change cost items. Instead, the program waits until you choose to recalculate by accessing this function.

Note: A project *is* automatically recalculated whenever you generate reports.

Description

You can choose to recalculate an entire project, or any project element at any level. When GOLD recalculates, it loads the Report Writer and uses it to:

- Automatically reprice labor and equipment costs, if the Estimate Type is set to A or C. Refer to Section 5.3 for definitions of the Estimate Types.
- Total up summary costs for each title being recalculated.
- Compute any cost adjustments or shipping costs set through the Adjust Pricing (Alt+F3) function. See Section 19.5.
- Roll in any subcontractor cost markups. After recalculation, the summary costs that are shown on title list screens (and title entry screens if a Cost Override is not applied) include cost markups up to the prime contractor responsible for the work. In other words, they are the costs to the prime. See Section 7.2 for more information on cost roll-ins.

Procedure

You can choose to recalculate at any time. Follow these steps:

1. Display the title list screen and highlight the title for the project element you want to recalculate. If you want to recalculate the entire project, highlight the Project Information Record on the Level 1 title list screen.

Note: You can also recalculate from title entry screens.

2. Press Shift+F2, or choose Recalculate from the Compute Menu.

Result: GOLD prompts you to confirm the action.

3. Press Y to confirm.

Result: GOLD recalculates the element or project. A message is displayed to inform you when processing is complete and if any errors occurred.

Note: If errors occurred, they will be listed in the file ERRORS.TXT, located in your GOLD startup directory. You can use the View Reports Using View option on the Reports Menu to view this file.

19.2 Reprice Material - Alt+F2 Keys

Purpose

In the Project and Assemblies Databases, this function reprices the material costs of items referenced from the Unit Price Database. GOLD refers to the currently selected Unit Price Database and uses the prices there to update the database you are working in.

Use in the Unit Price Database

This function also has an additional purpose. When accessed from a title entry screen in the Unit Price Database, this function adjusts material prices for all items below that title by whatever percentage(s) you have specified.

This use of the Reprice Material function is discussed in Section 10.3.

When to Use

In terms of the Project and Assemblies Databases, you should use this function if you have updated material prices in the Unit Price Database and need those changes reflected in the current estimate or assembly.

How to Use

The Reprice Material function can be used at either a detail or title level.

- To reprice the material cost of a single cost item, display the entry screen for that item in edit mode and press Alt+F2.
- To reprice at the title level, display a title entry screen in edit mode and press Alt+F2. The effect of repricing material at a title level depends on the database.
 - In the Project Database, it reprices material costs for all items in the database. This is exactly the same effect as choosing the Reprice Material option from the Prepare Menu when working outside of the database.
 - In the Assemblies Database, it reprices the material costs for the current assembly only.

Note: If the material cost has been changed on an item in a Project or Assemblies Database, the material override flag will be set to M and using Reprice Material from a title level or from the Prepare Menu will not change the material cost.

19.3 Reprice L & E - Ctrl+F2 Keys

Purpose

This function reprices labor and equipment costs for all items whose original source is the Labor or Equipment Rates Database. This includes cost items that reference crews stored in the Crews Database, as well as items copied directly from the Labor or Equipment Rates Database.

GOLD refers to the currently selected Labor and Equipment Rates Databases and uses the unit rates stored there to recompute labor and equipment costs for the affected items.

When to Use

Use this function if you have changed unit rates in the Labor or Equipment Rates Database after copying items into another database. You also need to reprice if you have changed an item's labor or equipment cost after copying it from its source database and want to restore its original price. Note that Reprice L&E does not restore the original hourly output if that has been changed.

You can use the Reprice L & E function to reprice costs in the Project, Assemblies, Crews, and Unit Price Databases.

Note: In the Project Database, if the Estimate Type is set to A (Crews with Auto Reprice) or C (CACES Mode), repricing is done automatically whenever you recalculate or run reports.

How to Use

You can reprice at either the title or detail level.

- To reprice the labor and equipment costs of a single cost item, display the entry screen for that item in edit mode and press Ctrl+F2.
- To reprice at the title level, display a title entry screen in edit mode and press Ctrl+F2. The effect at the title level depends on the database.
 - In the Project and Unit Price Databases, this function reprices labor and equipment for *all* items in the database. This is exactly the same effect as choosing the Reprice Labor and Equipment option from the Prepare Menu when working outside of the database.
 - In the Assemblies and Crews Databases, this function reprices the labor and equipment costs for the current assembly or crew only.

19.4 Link Quantity - Ctrl+F7 Keys

Purpose

The Link Quantity function is used to define or change links in the Project or Models Databases. These links are established between *local values* within a cost item and external *referenced values*.

Use With Assemblies

When you work with assemblies (or crews as assemblies) a predefined link exists between the cost item and the item's assembly (or crew) title. You can use the Link Quantity function to adjust the item's local quantity in relation to this predefined link.

Refer to Sections 6.6 and 6.9 for instructions.

Use With Models

When you work with the Models Module, you can not only adjust local values, but can also define links based on a range of available references and parameters.

These capabilities, along with the Models Database, are described in Volume 2.

19.5 Adjust Pricing - Alt+F3 Keys

Purpose

The Adjust Pricing function lets you change the Direct Costs within all or part of a project by one or more percentage factors that you specify.

This function only applies to the Project Database.

When to Use

Use this function when you want to adjust the costs in an estimate. For example, you might want to make regional adjustments based on published industry tables for different geographic locations.

Use for Shipping Costs

This function is also used to define shipping costs for a project. If Shipping is defined as a Direct Cost column, then you enter a shipping rate rather than an adjustment percentage in the Shipping column on the Adjust Pricing Screen. See Section 6.8 for details.

Where to Set Adjustments

The most common practice is to define adjustment factors for the entire project. To do so, you access this function from the Project Information Record, located on the Level 1 title list screen.

However, GOLD also allows you to define adjustment factors at the Owner Cost Level and lowest title level. Adjustments set at lower levels will override those set at higher levels for the same item or title.

After Setting Adjustments

Once you have set cost adjustment factors, you must recalculate the project (Shift+F2 keys) or run reports before the adjustments will be reflected on Project Database screens.

Accessing the Adjust Pricing Screen

To use the Adjust Pricing function, first display the appropriate title entry screen in edit mode, then press Alt+F3.

Result: The Adjust Pricing Screen is displayed (Figure 19.2).

Figure 19.2: Adjust Pricing Screen

Parts of the Screen

The Unit Price Identifier column, the leftmost column on the screen, is divided into two parts.

- The first part can be used to enter a partial Unit Price Database ID of up to five characters to identify the items to be adjusted.
- The second part of the column can be used to enter a short description of the item category.

The remaining columns are labeled with the Direct Costs defined for the project. You use these columns as needed to enter adjustments to apply to the Direct Cost.

Entering the Adjustments

For each cost column to be adjusted, enter the percentage of adjustment as a decimal multiplier.

Examples:

- To adjust material up 5%, enter .05 in the Material column.
- To adjust labor down 3%, enter -.03 in the Labor column.

Adjusting for All Items

If you want to apply a single set of adjustment factors for all items in the project (or under the current title), fill in only one row on the screen. Leave the ID column blank and enter the appropriate value in each Direct Cost column.

Adjusting by CSI Division

Cost items in the supporting databases supplied with GOLD use the CSI Divisions as the first two characters of their database IDs (UPB IDs). This makes it easy to adjust items by category, using the CSI Divisions.

Enter the CSI Divisions that you want to adjust in the Unit Price Identifier column, one per row. On each row, enter the adjustment values in the appropriate Direct Cost columns.

Note: You can also create a default row to define adjustment factors for any items not covered by your other entries. This would include any user-created items whose database ID does not fall within a CSI Division. The default row must be the top row on the screen and must have a blank Unit Price Identifier column.

Making Finer Adjustments

Sometimes, you may want to make finer distinctions than the CSI Divisions allow. You can define rows on the screen to break down the CSI Divisions to lower title levels, or to the level of an individual cost item.

Note: Be sure to add rows directly beneath the higher level title to which they apply. See the Caution below.

Adding and Deleting Rows

To add a row between two existing rows, press Shift+Insert. You can also press Shift+Delete to remove unneeded rows.

Caution on Adding Rows

When performing price adjustments or adding shipping costs, GOLD searches the leftmost column of the Adjust Pricing Screen for an ID that matches the current item in the Project Database. The program begins this search from the bottom of the screen. As soon as it finds a match for an item, it uses that row and does not work on that item further.

Therefore, when you add rows on the Adjust Pricing Screen, be sure to place the rows in descending numerical sequence beneath the CSI Division to which they apply.

Correct:	03	Incorrect:	03
	031		03110
	03110		031

If the rows were set up as in the incorrect example above, the program, searching from the bottom up, would first encounter row 031. This would be read as a match for cost item 03110 1111, so the program would apply that row's adjustment factor. It would not use the next row, which contains the factor actually intended for the specific cost item.

19.6 Add Modifier - Alt+O Keys

This option is used to add a modifier for a detail cost item in the Project Database, or to add a modifier to the modifier library in the Unit Price Database. See Sections 6.10 and 10.5, respectively, for instructions.

19.7 Edit Modifier - Ctrl+O Keys

You use this function to edit existing modifiers in either the Project or Unit Price Database. See Sections 6.10 and 10.5.

CHAPTER 20

THE TOOLS MENU

Purpose

The Tools Menu provides access to advanced estimating tools within the GOLD system.

Accessing the Menu

You can access the Help Menu at any time within a database by pressing the F9 key, followed by the H key. The menu is illustrated in Figure 20.1.

Refer to Section 3.7 for general information about the function menus.

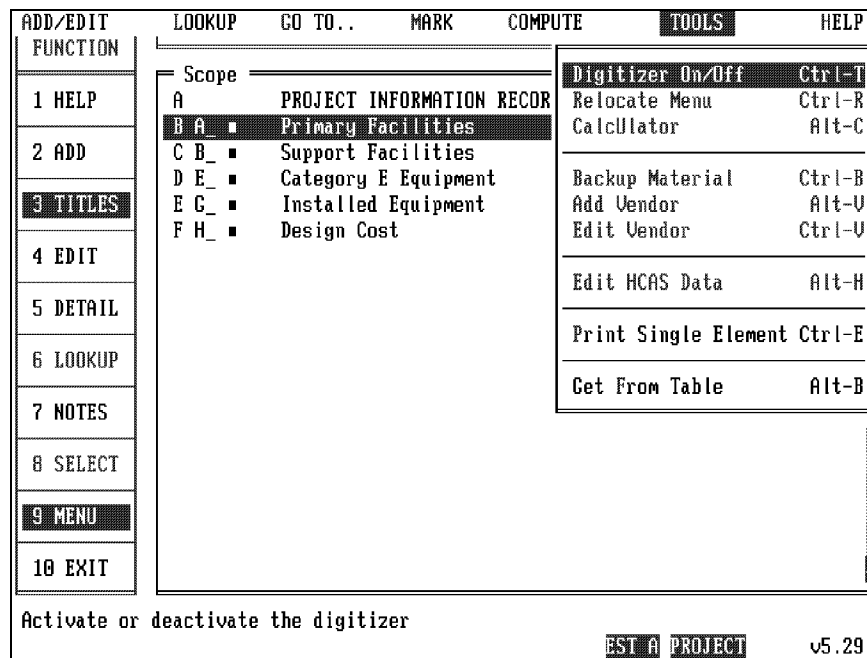


Figure 20.1: The Tools Menu

Optional Functions

Most of the functions on the Tools Menu are part of the GOLD Advanced Options and are discussed in Volume 2.

- Digitizer On/Off, Relocate Menu, and Calculator are functions of the Digitizer Module. See Volume 2, Chapter 7 for information.
- Backup Material, Add Vendor, and Edit Vendor are functions of the Material and Vendor Backup capability, a component of the System Toolkit. Refer to Volume 2, Chapter 9.

Chapter Overview

This chapter explains the Print Single Element and Get From Table functions, which are available as part of the basic GOLD software.

20.1 Print Single Element - Ctrl+E Keys

Purpose

The Print Single Element function (Ctrl+E) is used to print or send to a disk file a single element of a Project, Models, or Assemblies Database. You can choose a title at any level and this function will print it and all of its subtitles and detail items.

Contents of the Report

The report produced by the Print Single Element function is equivalent to a Detail Report for the chosen element. That is, the report shows the detail item costs and the costs as totaled at title levels.

If you have the optional Models Module, the report also shows information that you would see on the Link Listing Report. This includes any parameter worksheets defined at the level of the title element and lower levels, and any quantity links within the element.

See Section 23.12 for a description of the Detail Report. Refer to Volume 2, Chapter 5, for a description of the Link Listing Report.

Procedure

Use these steps to print an element of a Project, Models, or Assemblies Database.

1. Highlight the title for the element you want to print, or display the title's entry screen.
2. Press Ctrl+E or choose Print Element from the Tools Menu.

Result: GOLD prompts you to confirm printing the single element.

3. Press Y to confirm.

Result: The Run Reports Window is displayed.

4. Type in any field entries as needed if you want to add a secondary report title or change the destination of the report. (Refer to Section 23.7 for details on using the Run Reports Window.)

5. Press the Page Down key.

Result: The report is printed, or else saved as a text file on disk, as specified

20.2 Get From Table - Alt+B Keys

Purpose

The Get from Table capability allows you to view on the screen reference table data stored electronically in ASCII file format. You can also copy data from the ASCII file back to any input field on a GOLD screen. This makes it easy to input data that might otherwise have to be looked up in reference books and keyed in manually.

Supplied Data Files

Ten ASCII files representing construction productivity factors are supplied with the current release of MCACES GOLD and are stored in the GOLD530\TABLES subdirectory:

- Swell Voids and Load Factors
- Weight of Materials
- Bearing Powers
- Bucket Fill Factors
- Angle of Repose of Various Materials
- Coefficient of Traction Factors
- Typical Rolling Resistance Factors
- Speed Conversions
- Curve Superelevation
- Grade in Degrees and Percents

Procedure

Use this procedure to look up and copy ASCII file data. Begin on any GOLD screen, with the cursor in the field you want the data copied to.

1. Press Alt+B or choose Get From Table from the Tools Menu.

Result: A window is displayed with a listing of the available ASCII files in the GOLD530\TABLES subdirectory.

2. Move the highlight to the ASCII file you want to view, then press the Enter key.

Result: The selected ASCII file is displayed on the screen. (See Figure 20.2 for an example.)

3. To copy data back to the GOLD screen, do the following:
 - Use the Arrow keys to place the cursor on the word or number you want to copy.

Note: GOLD will copy all characters to the left and right of the cursor position until it encounters blank spaces.

 - Press the F10 key or Alt / B.

Result: The GOLD screen is redisplayed, with the chosen data now entered in the current field.

BEARING POWERS				
MATERIAL	BEARING POWER			
	Bar	lb/ in2	Metric t/m2	U.S. tons/ ft2
Rock (semi-shattered).....	4.8	70	50	5
Rock (soild).....	24.1	350	240	24
Clay, dry.....	3.8	55	40	4
medium dry.....	1.9	27	20	2
soft.....	1.0	14	10	1
Gravel, cemented.....	7.6	110	80	8
Sand, compact dry.....	3.8	55	40	4
clean dry.....	1.9	27	20	2
Quicksand & alluvial soil.....	0.5	7	5	0.5

Figure 20.2: Sample ASCII Table Display Screen

Adding Data Files

You can add ASCII data files to be used for viewing and capturing at any time. Any software that can write data in ASCII format can be used to create the files. Don't use Tabs in editing. The first line of your text file will become the title of your table.

You can store as many as 30 files in the GOLD530\TABLES directory. The maximum dimensions are 100 rows (lines) by 125 columns (characters). That is, Gold will access up to 100 rows and 125 columns of an ASCII file. Rows and columns beyond those limits will be unavailable, and Gold will issue a message informing you that the file has been truncated.

CHAPTER 21

THE HELP MENU

Purpose

The Help Menu gives you access to the GOLD Help system. This menu also lets you view the current memory status of your computer.

Accessing the Menu

You can access the Help Menu at any time within a database by pressing the F9 key, followed by the H key. The menu is illustrated in Figure 21.1.

Refer to Section 3.7 for general information about the function menus.

Figure 21.1: The Help Menu

Chapter Overview

This chapter explains the options on the Help Menu and when they should be used.

Note: The name of each option is shown along with its speed key or key combination, which you can use to access the function without displaying the menu.

21.1 Help - F1 Key

Purpose

This function displays onscreen Help throughout the program.

Layers of Help

GOLD Help is multi-layered. Depending on your location in the program, three or four levels of Help text are available.

Using Help

Press F1 to access the first layer of Help. This layer provides information on the current field, where applicable, or else on the current screen.

Once a Help window is displayed, press F1 to access upper layers of Help. These provide more general information about the current screen, database, or area of the program. The uppermost level of Help is always Keys Help (see below).

Scrolling Help Text

Many Help windows contain more text than can be shown at one time. Press the Down Arrow key to scroll down and see additional text, where applicable.

The scroll bar on the right of the Help window always indicates your position relative to the beginning and end of the text.

Dismissing Help

At any level, you can dismiss the Help window and return to your previous place in the program by pressing F10 or Esc.

21.2 Keys Help - Shift+F1 Keys

You can use this option at any time in the program to bypass the upper levels of Help and immediately display Keys Help.

Keys Help provides a listing of the currently available keys, depending on where you are in the program.

21.3 Edit Help - Ctrl+F1 Keys

Purpose

Use this option when you want to edit or add text to the Help screens in the program. For example, you could use this function to add special project parameters or codes specific to your site.

How to Use

From any location where you want to edit the Help text, press Ctrl+F1.

Result: The Help window appears with the cursor in the window.

Type in whatever additional information or changes you need. When you are finished, press F1 to exit and save.

Special Keys

While editing Help, you can use the same special keys as when you edit Notes. Refer to Section 15.2 for a listing of the keys.

21.4 Show Memory - Alt+S Keys

Purpose

This function shows the current memory allotment in your computer. This information is provided to assist support personnel in diagnostic procedures.

Note: This function can be used from any point in the program. You do not have to be working within a database.

Information Displayed

Pressing Alt+S displays the following information on the message line at the bottom of your screen:

Field	Description
DOS	The memory available for the program to borrow from DOS.
Used	Memory currently used by the program for data.
Free	Memory currently unused and available to the program.
Total	The sum of the DOS, Used, and Free amounts. This is the total amount of memory available for the program to use for storing and processing data.

CHAPTER 22

THE PREPARE MENU

Purpose

The Prepare Menu provides options for changing the structure of Project or Models Databases, and for updating price information in databases.

Accessing the Menu

You can access the Prepare Menu from the Main Menu Screen, by pressing the P key. The menu is illustrated in Figure 22.1.

Note: Whichever database is currently highlighted in the database window will be the one affected by the Prepare Menu function you choose.

Refer to Section 3.8 for general information about the database menus.

FUNCTION	PREPARE	REPORTS	SERVICES	ADMIN	UTILITIES	MCACES	DOS
1 HELP	Name Database Columns						
2 ADD	Set Breakdown Structure						
3 TITLES	SElect 2nd View Columns						
4 EDIT	Set 2nd View Exceptions						
5 DETAIL	Reprice Labor and Equip						
6 LOOKUP	Reprice Material						
7 NOTES	Copy Project Notes						
8 SELECT							
9 MENU							
10 EXIT							

DATABASE	DIRECTORY	ID	NAME	MCACES GOLD
Project	C:\GOLD\PR...	CIVEXM	Buffalo Bayou	
Models	C:\GOLD\DATA	HTWMB4	HTRW REMEDIAL ACTION WBS	
Assemblies	C:\GOLD\DATA	HTWASL	HTRW ASSEMBLIES LIBRARY	
Unit Prices	C:\GOLD\DATA	NAT92A	1992 National Unit Price Book	
Crews	C:\GOLD\DATA	NAT94A	1994 National Crews Database	
Labor Rates	C:\GOLD\DATA	NAT94A	1994 National Labor Rates	
Equip Rates	C:\GOLD\DATA	NAT93A	1993 National Equipment Database	

Change the name and contents of database columns

EST A PROJECT v5.30

Figure 22.1: The Prepare Menu

Advanced Options

Two of the choices on the Prepare Menu are used only with the 2nd View capability:

- Select 2nd View Columns
- Set 2nd View Exceptions

These options are discussed in Chapter 8 of *Volume 2, Advanced Options*.

Chapter Overview

This chapter describes the purpose and use of the following Prepare Menu options:

- 22.1 Name Database Columns
- 22.2 Set Breakdown Structure
- 22.3 Reprice Labor and Equipment
- 22.4 Reprice Material
- 22.5 Copy Project Notes

22.1 Name Database Columns

Purpose

This option is available for Project, Assemblies, and Models Databases. For each database type, the option accesses a screen used to define or change the content and format of the cost columns used in the database.

You can change the cost columns for an Assemblies or Models Database just as you can for a project. This allows you to match the column structure of the two supporting databases to your projects and to more easily copy data among the three database types.

Accessing the Option

To access the Name Database Columns option, do the following from the Main Menu Screen:

1. In the database window, position the highlight on the Project, Models, or Assemblies Database.
2. Press P to display the Prepare Menu, then press N to choose the Name Database Columns option.

Result: The Name Columns Screen for the highlighted database type is displayed. (The screens are exactly the same except for their titles.)

For More Information

Sections 5.3 and 5.4 contain detailed instructions on using this option for the Project Database. The same instructions apply to the other two database types.

22.2 Set Breakdown Structure

Purpose

This option is available for Project, Assemblies, and Models Databases. For each database type, the option accesses a screen used to define or change the overall hierarchy of the database, including the name of each title level and the number of title ID characters available at each level.

You can change the breakdown structure of Assemblies and Models Databases just as you can for your projects. This flexibility allows you to match the structure of the two supporting databases to your projects and to more easily copy data among the three database types.

Accessing the Option

To access the Set Breakdown Structure option, do the following from the Main Menu Screen:

1. In the database window, position the highlight in either the Project Database or Models Database.
2. Press P to display the Prepare Menu, then press B to choose the Set Breakdown Structure option.

Result: The Set Breakdown Structure Screen for the highlighted database type is displayed.

For More Information

Section 5.5 contains detailed instructions on using this option for the Project Database. The same instructions apply to the other two database types, except that no Owner Cost Level is used for Models or Assemblies Databases.

22.3 Reprice Labor and Equipment

Purpose

This option updates the labor and equipment prices in a database to reflect the unit rates in the currently selected Labor and Equipment Rates Databases.

Affected Databases

This option can be applied to the Project, Models, Assemblies, Unit Price, and Crews Databases.

Note: For Project Databases, when the Estimate Type is set to A (Crews with Auto Reprice) or C (CACES Mode), this repricing is done automatically whenever you recalculate or run reports.

Description

This option reprices all cost items in the highlighted database that have IDs which reference the currently selected Labor or Equipment Rates Database. It also reprices items that have a reference to a valid crew in the currently selected Crews Database.

The labor or equipment costs in the affected items are changed to reflect the unit rates in the current Labor and Equipment Rates Databases.

When to Use

Use this option when you have updated prices in a Labor or Equipment Rates Database and you need the changes reflected in your other databases.

You may also need to perform this update if you use multiple Labor or Equipment Rates Databases and you are selecting a different one of these multiple databases to work with. In this case, you need to reprice labor and equipment before running reports, unless you have set the Estimate Type for auto repricing (Type A or C).

Procedure

Use these instructions to update labor and equipment prices in a database.

1. From the Main Menu Screen, with the highlight in the database window, move the highlight to select the database you need to reprice.
2. Press the P key to access the Prepare Menu.

3. Press L to access the Reprice Labor and Equipment option, then press Enter.

Result: You are prompted to confirm the update.

4. Enter Y to confirm.

Result: The program updates the chosen database using the rates in the currently selected Labor and Equipment Rates Databases. When the update is finished, the Main Menu Screen is redisplayed.

22.4 Reprice Material

Purpose

This option updates the material prices in a Project, Models, or Assemblies Database to match the prices in the currently selected Unit Price Database.

Description

This option reprices cost items in the currently highlighted database that have Unit Price Database IDs. The material prices in these items are changed to match the current prices in the UPB Database. For each item, the date stored in the Material Price Updated field is also copied.

Any items in the chosen database that have had cost overrides applied to their material prices are not changed by the repricing. (That is, any items with a value of Material or Both in the UPB Cost Override field.)

For any items in the UPB that have had material prices changed by overrides, the new prices are copied to the target database, and the value in the UPB Override field (Material or Both) is also copied.

When to Use

Use this option when you have updated material prices in a Unit Price Database and you need the changes reflected in your other databases.

Procedure

Follow these steps to reprice material in a database.

1. From the Main Menu Screen, with the highlight in the database window, move the highlight to select the Project, Models, or Assemblies Database you need to reprice.
2. Press the P key to access the Prepare Menu.
3. Press M to access the Reprice Material option, then press Enter.

Result: You are prompted to confirm the update.

4. Enter Y to confirm.

Result: GOLD updates the chosen database with the prices in the currently selected Unit Price Database. When the update is finished, the Main Menu Screen is redisplayed.

22.5 Copy Project Notes

Purpose

The Copy Project Notes option lets you copy project notes from one Project Database to another. *Project notes* are defined as any notes attached to the Description field on the Report Title Page Screen, through use of the Notes (F7) function.

When to Use

This option is useful if you have different Project Databases representing the same or a similar estimate, and you want to copy the notes from one to another without retyping them.

Procedure

Follow these steps to copy project notes from one Project Database to another. Begin on the Main Menu Screen with the highlight on the Project Database you want the notes copied to.

1. Press P to display the Prepare Menu. Press Enter to accept the Copy Project Notes option.

Result: GOLD displays a window showing the drive and directory of the current Project Database.

2. If the Project Database you want to copy from is in a different drive or directory, type over the current entry with the correct drive and directory. Then Press the F8 key.

Otherwise, just press the F8 key.

Result: A window is displayed listing all Project Databases with Project Notes in the specified path.

3. Move the highlight to the Project Database you want to copy the notes from. Then press the Enter key.

Result: GOLD copies the project notes from the specified database to the current Project Database. A message informs you when processing is complete.

Note: If the project you are copying to already has project notes, GOLD first prompts you to confirm overwriting those notes. Enter Y to confirm or N to deny.

CHAPTER 23

REPORTS

Introduction

GOLD gives you extensive and flexible reporting capabilities. You can use these capabilities to produce detailed estimates and a wide range of summary and backup reports.

You can also print reports listing the software settings used in a project, as well as the contents of supporting databases. You can send reports to a text file on disk rather than printing, and you can then view these text files on your screen.

Chapter Overview

This chapter provides an overview of how to use GOLD for creating reports. It then describes the Reports Menu and explains each menu option. Finally, the chapter describes each report and illustrates many of them with samples and analyses.

The following sections are contained in this chapter:

- 23.1 Reports Overview
- 23.2 The Reports Menu
- 23.3 Edit Detail Report Formatting
- 23.4 Edit Other Formatting
- 23.5 Edit Report Title Page
- 23.6 Select Reports to Print
- 23.7 Print Selected Reports To
- 23.8 Printing Database Listings
- 23.9 View Reports Using Viewer
- 23.10 List Material Backup / Vendor
- 23.11 Save / Load Report Settings
- 23.12 The Detail Report
- 23.13 Project Summary Reports
- 23.14 Contractor Summary Reports
- 23.15 Division Summary Reports
- 23.16 System Summary Reports
- 23.17 Shipping Summary Report
- 23.18 Backup Reports
- 23.19 Settings Reports

About the Sample Reports

The sample reports shown in Sections 23.12 through 23.15 are based on the DEMAIR Project Database, which is introduced in Chapter 3.

These reports are formatted and selected according to the specifications shown on the report screens illustrated in this chapter and the Prepare Menu screens illustrated in Chapter 5. You can refer to those illustrations while studying the reports, to see how the screen entries determine the printed results.

Note: The DEMAIR project illustrates estimating and reporting using labor and equipment unit costs and without using crews. The sample Backup Report in Section 23.18 are based on the MILEXM Project Database, which illustrates crew, labor, and equipment reporting. This project is also distributed as a sample on the GOLD diskettes.

23.1 Reports Overview

Definition

The *Report Writer* is that portion of the GOLD software that you use to format, select, and print reports.

You can also use the Report Writer to save reports to disk so that they can be viewed on your screen.

Formatting Reports

Creating reports involves preliminary formatting steps accomplished through the Prepare Menu, as well as additional formatting tasks accomplished through the Reports Menu. All of these tasks are shown in the Task List below.

Once you have established the report formats for a project, you will probably use the same formats repeatedly. You can, however, make adjustments at any time before running the reports. You can also save report settings to disk and reload them later for use.

Recalculating the Estimate

When you print reports or store them in a disk file (in Task 5 below) GOLD automatically recalculates the estimate. You do not need to manually choose the Recalculate (Shift+F2) function before running reports.

Note: The exact process the program uses for recalculating depends on the Estimate Type, which is specified on the Project Columns Screen. See Section 5.3.

Task List

This list summarizes all the tasks involved in creating reports with GOLD.

1. When you create the project, you specify the names and widths of project columns on the Name Project Columns Screen.

You also define the number and names of project title levels on the Set Breakdown Structure Screen.

Together, these tasks provide preliminary format input to the Report Writer.

2. After building a project, you provide further format information on the Detail Report Formatting Screen and the Other Report Formatting Screen, both of which are accessed from the Reports Menu. For Special Formatting Options, see section 23.4.

Note: If you work with more than one set of formats, you may choose to store report settings on disk, using the Save / Load Report Settings option.

3. At any time before printing, you can fill in title page information for the reports, using the Edit Report Title Page option.
4. When you are ready to print, you use the Select Reports to Print option to access the Report Selection Screen. This screen is used to select which detail and summary reports to print.
5. After selecting reports, you access the Run Reports Window, where you can add an additional report title and then select the printer port or file where the reports are to be sent.

Using the Page Down Key

Once you begin the report process by accessing one of the report formatting screens (Task 2 above), you can use the Page Down Key to move from one screen to the next in the following sequence:

1. Detail Report Formatting Screen
2. Other Report Formatting Screen
3. Report Title Page Screen
4. Report Selection Screen
5. Run Reports Window

You can also use the Page Up key to move backward through the sequence.

Using the paging keys in this way lets you move efficiently through report preparation, without having to return to the Reports Menu to access each screen.

Printing a Single Element

If you want to print only a single *element* of a project (that is, any title with all of its subordinate subtitles and detail items), you can use the Print Single Element function. You can also use this function to print elements of a Models or Assemblies Database. See Section 20.1.

How to Stop Printing

Printing large reports can be a lengthy process. If, at any time, you want to stop printing, press the Ctrl+End keys.

Result: GOLD cancels the print process and returns to the Main Menu Screen.

Note: Do *not* use the Ctrl+Break keys to interrupt GOLD processing as this can distort the video monitor.

23.2 The Reports Menu

Purpose

The Reports Menu provides access to the functions of the GOLD Report Writer. These include options for customizing and storing report formats, as well as for printing reports or viewing them on the screen.

Accessing the Menu

You access the Reports Menu from the Main Menu Screen, by pressing the R key. The menu is illustrated in Figure 23.1.

Refer to Section 3.8 for general information about the database menus.

Menu Options

The options on the Reports Menu are described in the following sections.

Figure 23.1: The Reports Menu

23.3 Edit Detail Report Formatting

About the Detail Report

The *Detail Report* is the detailed listing of an estimate. This report shows every cost item and title in the project and lists their Direct Costs.

Refer to Section 23.12 for examples and illustrations of this report.

Purpose

The Edit Detail Report Formatting option allows you to define the page format for the Detail Report. This includes information on where subtotals are printed, and whether titles, notes, and unit costs are shown.

When to Use

Use this option when you have completed or partially completed your estimate and you need to define the format for the Detail Report.

Detail Report Formatting Screen

Choosing the Edit Detail Report Format option displays the Detail Report Formatting Screen, as shown in Figure 23.2.

Figure 23.2: Detail Report Formatting Screen

Controlling the Content and Format of the Detail Report

GOLD enables you to include a large amount of information in the Detail Report. However, there may not always be enough horizontal space on the page to print all of the information you want to include. GOLD measures report width in character spaces. The maximum number of character spaces depends on your printer, and is communicated to GOLD by the value of the Width field on the Edit Printer Setup Tables Screen. (See Section 25.3.)

To control the exact look and content of the Detail Report, be aware of the following:

- The number and width of cost columns is defined on the Name Project Columns Screen, discussed in Sections 5.3 and 5.4.
- The Column Options and the Show Cost Code field on the Detail Report Formatting Screen add width for each detail item row. See the Field Descriptions below.

If GOLD does not have enough width to print a row of the Detail Report, it first deletes the cost code (if it is selected for printing). If there is still not enough room, GOLD will truncate the item's description.

Completing the Screen

Type values into the fields on the screen as needed to define the detail format. Refer to the Field Descriptions below.

When you have finished filling in the screen, you can:

- Press the F10 key to save the format and return to the Main Menu Screen
- Press the Page Down key to proceed to the Edit Other Formatting Screen.

Field Descriptions

Following are the fields on the Detail Report Formatting Screen.

Field	Description
<u>Page Options</u>	
Page Break Levels	Title level at which to start a new page. Valid values are 1-6.
Table of Contents Levels	Lowest title level to be included in the report table of contents. Values are 1-6.
<u>Row Options</u>	
Print Titles at Levels	Enter Y for each title level for which you want titles printed.
Print Totals at Levels	Enter Y for each title level where you want subtotals printed.
Print Notes at Levels	<p>Enter Y for each level where you want Notes that were attached to titles to be printed. Level 0 refers to any Notes defined on the Report Title Page Screen. Level 7 refers to Notes attached to detail items. (For Notes attached to a detail item to print, the Print Notes field on that item's entry screen in the Project Database must also be set to Yes.)</p> <p>Note: To print title-level Notes, you must also enter Y in the corresponding Print Titles at Levels column.</p>
Print Unit Cost Row	Enter Y to print unit costs for each item. Unit costs are printed on a separate row above the extended costs for each item.
Print Page Footer	Enter Y to print a page footer containing the name of the Crews Database, the currency, and the project ID.
Show Cost Codes	Enter Y to show the cost codes (UPB IDs) for each item. Enter N to show only the items' descriptions. Cost codes are printed on the same row as the item's description and costs.

Field	Description
<u>Column Options</u>	
Print Crew ID	Enter Y to print the Crew ID for each cost item that references the Crews Database.
Crew Output	Enter Y to print the crew output figure for each cost item that references the Crews Database.
Unit Cost	Enter Y to print a column that contains the calculated unit cost for each title and detail item. This column is printed to the right of the total cost column.
<u>UPB Titles</u>	
No. of Levels to Print	<p>For detail items brought in from the Unit Price Database, you can print one or more levels of UPB titles above the detail item.</p> <p>Enter the number of levels to print in this field. For example, enter 2 to print the two title levels immediately above the detail item in the UPB.</p> <p>Enter 0 to print no UPB titles.</p>
Bracket Titles With	<p>Enter left and right characters to use as brackets around the UPB titles to improve their visibility.</p> <p>Examples: < > []</p>
Include Titles Notes	Enter Y to print any Notes attached to the UPB titles that are printed.

23.4 Edit Other Formatting

Purpose

You use the Edit Other Formatting option to determine the exact format of summary reports. You also use this option to specify Special Formatting Options for detail and summary reports, as explained below.

About Summary Reports

Summary reports provide information summarized at the level of project titles. GOLD gives you a wide range of options for producing summary reports. Refer to Sections 23.13 through 23.17 for details and examples.

Since summary reports mirror the title structure of the project, much of their format and content are determined by the information you enter on the Name Project Columns and Set Breakdown Structure Screens. You use the Edit Other Formatting option to make final adjustments to the formatting.

About Special Formatting Options

Special Formatting Options provide added flexibility for producing summary and detail reports. You can use these options to:

- Report project totals apart from Additive or Alternative features, which you have defined as separate Level 1 title elements.
- Print summary footers showing cost markups at any title level.
- Print Indirect and Owner cost markups as a percentage of running totals on summary reports.
- Produce Detail Reports with costs sorted by CSI division below a specified title level.

See “Using Special Formatting Options” at the end of this section for details.

Other Report Formatting Screen

Choosing the Edit Other Formatting option displays the Other Report Formatting Screen, as shown in Figure 23.3.

OTHER REPORT FORMATTING	
FUNCTION	COLUMN TITLES FOR SUMMARY REPORTS
1 HELP	Column 1 FIELD OH : Prime Contractor's Field Overhead
2 ADD	Column 2 HOME OFC : Prime's Home Office Expense
3 TITLES	Column 3 PROFIT : Prime Contractor's Profit
4 EDIT	Column 4 BOND : Prime Contractor's Bond
5 DETAIL	Column 5 (Unused) : (Unused)
6 LOOKUP	Column 1 CONTINGN : Contingency
7 NOTES	Column 2 ESCALATN : Escalation
8 SELECT	Column 3 (Unused) :
9 MENU	Column 4 (Unused) :
10 EXIT	Column 5 (Unused) :
	STANDARD COLUMN WIDTHS
	Quantity Columns : 8
	Total Cost Columns : 12
	Unit Cost Columns : 8
	SUMMARY FEATURES
	Round Summary Costs : N-None
	Contingency Notes : No
	Show Project Totals : Yes
Title to print for this column on Summary Reports	
OTHER EST A PROJECT v5.30	

Figure 23.3: Other Report Formatting Screen

Completing the Screen

Type values into the fields on the screen as needed to define the report format. Refer to the Field Descriptions below.

When you have finished filling in the screen, you can:

- Press the F10 key to save the format and return to the Main Menu Screen
- Press the Page Down key to proceed to the Report Title Page Screen.

Field Descriptions

Column Titles For Summary Reports

These two sets of fields at the top of the screen contain the column titles entered on the Name Project Columns Screen for Project Indirect Costs and Project Owner Costs. The length of these titles is limited by the necessity of fitting them on the screen. You can use these fields to enter extended column titles for the two sets of costs to be printed on the summary reports.

Standard Column Widths

These fields allow you to enter standard column widths for the following types of columns on summary reports. Valid entries are between 0 and 20 digits. (Enter 0 if you do not want to print a column.)

- Quantity Columns
- Total Cost Columns
- Unit Cost Columns

Note: The Total Cost Column field also controls the width of that column on the Detail Report.

Summary Features

These fields let you select additional options for Summary Reports.

Field	Description
Round Summary Costs	<p>Indicates the degree of rounding to be used on the summary reports. The rounding effects only how the costs are printed, not the way they are calculated or stored by the program. Codes are:</p> <p>N - None. Costs are not rounded (default).</p> <p>T - Tens. Costs are rounded to the nearest ten.</p> <p>H - Hundreds. Rounded to the nearest hundred.</p> <p>M - Thousands. Rounded to the nearest thousand.</p> <p>I - In Thousands. Rounded to the nearest thousand and expressed in thousands. For example, 10,875 would be printed 11.</p> <p>Note: If you choose option I, the report heading will indicate that costs are expressed in thousands.</p>
Contingency Notes	<p>Indicates whether or not to print Contingency Notes attached to specific Owner Costs. The Notes are printed on the Owner Summary Report.</p> <p>Refer to Section 7.7 for more information on Contingency Notes.</p>
Show Project Totals	<p>Specifies whether project-level totals are printed on the summary reports. Values are Yes and No.</p>

Using Special Formatting Options

To choose special formatting options for reports, you access the Special Formatting Options Screen (Figure 23.3A).

1. From the Other Report Formatting Screen, press Shift-F7.
2. Fill in the fields to define the options you want. See the descriptions of each option, below.
3. Press Shift-F7 again to return to the Other Report Formatting Screen.

FUNCTION	OTHER REPORT FORMATTING
1 HELP	COLUMN TITLES FOR SUMMARY REPORTS
2 ADD	SPECIAL FORMATTING OPTIONS
3 TITLES	First Alternate ID : 11
4 EDIT	Show Markup at Level : 0
5 DETAIL	Display Indirect/Owner Markup as : A - Unit Costs Only
6 LOOKUP	CSI Sort at Level : 0
7 NOTES	STANDARD COLUMN WIDTHS
8 SELECT	SUMMARY FEATURES
9 MENU	Quantity Columns : 10
10 EXIT	Total Cost Columns : 12
	Unit Cost Columns : 10
	Round Summary Costs : N-None
	Contingency Notes : No
	Show Project Totals : Yes

Degree of rounding for Total Summary Costs; <F8> to see choices

OTHER EST A PROJECT v5.30

Figure 23.3a: Special Formatting Options Screen

First Alternative ID

This option allows you to produce summary reports with certain Level 1 title elements as part of the base bid and other Level 1 elements as additives or alternatives. All costs for the base bid elements will be included in the project totals on the level 1 summary reports, while the alternatives will be listed separately and will not be included in the totals.

To use this option, you must first structure your project so that alternative costs are defined as separate title elements at Level 1. Then, in the Alternative ID field, enter the ID of the first Level 1 title that is to be considered an alternative.

Result: All Level 1 titles with this ID or higher will be reported as alternatives and will not be included in the on-screen total at the Project Information Record.

Show Markup at Level

Use this option to print summary footers of Indirect and Owner cost markups for any title level on the Project Direct or Indirect Summary Reports. If you choose another level, separate footers showing the markups are printed after each title for that Level.

Display Indirect/Owner Markup As

In the summary footers discussed above, the total of each Indirect and Owner markup is printed. The Display Indirect/Owner Markup As option determines whether the summary footers also include each markup's unit cost or the percentage of the running total of costs which that markup represents. If Percent of Total is chosen, the percentage printed for each markup is the computed percentage (for *all* contractors) of the running total up to that markup.

Note: This computed percentage is not necessarily the same as the running percent that you might enter for a *single* contractor on a Contractor Entry Screen.

Options are:

- Unit Costs Only
- Percent of Total
- Do not display (Do not print unit costs or percentages)

CSI Sort at Level

This option is used to print a Detail Report with costs sorted according to CSI Division. The Level number you enter in this field is the lowest level of project titles that will be printed. Beneath this level of title, all subordinate cost items will be printed, sorted according to CSI Division as determined by the items' database Ids (typically UPB Ids).

You can also print relevant UPB titles for the detail items, using the UPB Titles fields on the Detail Report Formatting Screen. (See the Field Descriptions in Section 23.3). Combining these two features allows you to produce reports with a mixture of project and UPB titles.

Note: Using the CSI Sort at Level field has the following effects on other GOLD reporting features:

- Summary Reports cannot be printed at a level lower than the level selected for the CSI Sort.
- If you have altered prices on titles below the CSI Sort level, using either the Adjust Pricing function or the Overtime fields, these changes will not be reflected in reports.
- Any Owner Costs defined at levels below the CSI Sort level will be ignored on summary reports.

23.5 Edit Report Title Page

Purpose

The Edit Report Title Page option is used to record general information about the project. This information is printed on the title page of project reports.

Report Title Page Screen

Selecting this option from the menu displays the Report Title Page Screen, which is shown in Figure 23.4.

FUNCTION	REPORT TITLE PAGE
1 HELP	Project : Storage Building Battalion Headquarters Fort Stewart Georgia
2 ADD	
3 TITLES	
4 EDIT	Designed By : The Architect/Engineer Partners Estimated By : Cost Consultants International
5 DETAIL	Prepared By : David P. Estimator, Lead
6 LOOKUP	
7 NOTES	Date of Escalation Index : 01/31/91 Effective Pricing Date : 03/15/91
8 SELECT	Preparation Date : 03/15/91 Est Construction Time : 280 Days Sales Tax : 4.00%
9 MENU	
10 EXIT	

Project Description; use NOTES <F7> to expand

EST A PROJECT v5.29

Figure 23.4: Report Title Page Screen

Project Notes

You can also use the Report Title Page Screen to attach any project-level notes. These notes are printed on a page following the title page of reports.

To add or edit project notes, press the F7 Notes key from the Project field on the Report Title Page Screen. After typing the notes, press the F7 key again to exit.

Completing the Screen

Enter information in the fields on the screen as needed to define the title page information. Refer to the Field Descriptions below.

When you have finished filling in the screen, you can:

- Press the F10 key to save the format and return to the Main Menu Screen
- Press the Page Down key to proceed to the Report Selection Screen.

Field Descriptions

The following table describes each field on the Report Title Page Screen.

Only the Sales Tax and Estimated Construction Time fields are actually used in cost calculations. The rest of the fields are purely for information.

Field	Description
Project	<p>The first line of this field is filled in by GOLD with the project name entered on the Project Database Edit Screen.</p> <p>The other four lines are available for entering additional text, such as the location and description.</p> <p>Note: Press F7 (Notes) from this field to enter project-level Notes.</p>
Designed By	The architect's or engineer's name or the firm's name.
Estimated By	The estimator's name or firm's name.
Prepared By	The estimator's firm or consulting firm and location.
Date of Escalation Index	The date of publication of escalation indexes used in the project. For information only.
Effective Pricing Date	Date for which the pricing in this field is effective. For information only.
Preparation Date	The date is automatically filled in with the computer system date when the project is created. You can then change the date at any time.
Est Construction Time	Estimate of the time in work days to complete the project. Used to compute contractor Bond premiums if the project is estimated at more than 12 months duration. See Section 7.4 for details.

Field	Description
Sales Tax	Sales tax, entered as a percentage, to be applied to all material costs.

23.6 Select Reports to Print

Purpose

This option is used to select from all the available reports for a project. It is also used to specify which costs categories and title levels are included on summary reports, and other information.

Note: This menu option can also be used specify information to print from the supporting databases. See Section 23.8 for instructions.

When to Use

Use this option when you are ready to select one or more project reports to print or to save to a text file.

Report Selection Screen

You choose project reports on the Report Selection Screen, which is shown in Figure 23.5.

REPORT SELECTION (PgDn to Print Selected Reports)	
FUNCTION	<div> <div>Project Settings : <input type="checkbox"/></div> <div>Contractor Settings : <input type="checkbox"/></div> <div>Link Listing : <input type="checkbox"/></div> </div> <div> <div>Profit Guidelines : <input type="checkbox"/></div> <div>Measurement Units : <input type="text" value="Original"/></div> </div>
1 HELP	
2 ADD	
3 TITLES	
4 EDIT	
5 DETAIL	<div>REPORT FORMAT TYPE FOR LEVEL(S)</div> <div>Direct Indirect Owner 0 1 2 3 4 5 6</div> <div> <div>Detail : <input type="checkbox"/></div> <div>Project : <input type="checkbox"/></div> <div>Contractor : <input type="checkbox"/></div> <div>Division : <input type="checkbox"/></div> <div>System : <input type="checkbox"/></div> <div>2nd View : <input type="checkbox"/></div> </div>
6 LOOKUP	
7 NOTES	
8 SELECT	<div>Crew : <input type="checkbox"/></div> <div>Labor : <input type="checkbox"/></div> <div>Equipment : <input type="checkbox"/></div> <div>Prime Labor Cost Level : <input type="checkbox"/></div>
9 MENU	
10 EXIT	

Enter Y to select a report showing all chosen project settings

EST A PROJECT v5.29

Figure 23.5: Report Selection Screen

Procedure

Follow these steps to select project reports to print. Begin on the Main Menu Screen, with the highlight on the Project Database.

1. Press R to access the Reports Menu, the press R to choose the Select Reports to Print option.

Result: The Report Selection Screen is displayed.

2. Fill in the fields on the screen as needed to make your selections. See the Field Descriptions below.
3. When you have finished filling in the screen, you can:
 - Press the Page Down key to proceed to the Run Reports Window to actually generate the reports. (See the next section for further instructions.)
 - Press the F10 key to save the settings and exit to the Main Menu Screen

Field Descriptions

The following table describes the fields on the Report Selection Screen. Refer to Sections 23.12 through 23.19 for more details on the kinds of reports.

Field	Description
Project Settings	Enter Y to print a report showing all the option settings made for the project. This report also shows the project titles for which Owner Cost, Adjust Pricing, and Overtime settings have been made.
Contractor Settings	Enter Y to print a report showing all settings made for contractors.
Link Listing	This field is used to produce a Link Listing Report, showing quantity links and parameter worksheets within a project. This report is part of the optional Models Module, and is described in Volume 2.
Profit Guidelines	Enter Y to print a report for each contractor using the Compute method to calculate the profit. This report will display the weights attached to each risk factor, as well as any notes attached to the Profit Weighted Guidelines screen.

Field	Description
Measurement Units	<p>Determines the units of measurement used in quantity fields. Values are:</p> <ul style="list-style-type: none"> • Original (the units originally entered in the estimate) • U.S. • Metric
Detail	Enter Y to print a Detail Report, which shows all Direct Costs and all levels of the estimate.
Project	<p>These fields generate project summary reports.</p> <p>Enter Y in each cost column to indicate which types of project summary reports to generate. Enter Y in each title-level column to indicate which levels of titles to include in each report.</p> <p>Note: Title Levels 1 and 2 are automatically printed in the report headings. If you enter Y for Levels 1 and 2, they will also be printed on separate lines in the body of the report.</p>
Contractor	<p>These fields generate reports that summarize the estimate by contractor.</p> <p>Enter Y in each cost column to indicate which types of contractor summary reports to generate. (Owner Costs do not apply). Enter Y in each title-level column to indicate which levels of titles to include. (Level 0 provides a summary for the entire project.)</p>

Division	<p>These fields generate reports that summarize the estimate by type of cost item using the CSI Divisions (that is, the Level 1 titles in the Unit Price Database).</p> <p>Enter Y in each cost column to indicate which types of division summary reports to generate. Enter Y in each title-level column to indicate which levels of titles to include. (Level 0 provides a summary for the entire project.)</p>
----------	--

Field	Description
Division	<p>These fields generate reports that summarize the estimate by type of cost item using the CSI Divisions (that is, the Level 1 titles in the Unit Price Database).</p> <p>Enter Y in each cost column to indicate which types of division summary reports to generate. Enter Y in each title-level column to indicate which levels of titles to include. (Level 0 provides a summary for the entire project.)</p>
Measurement Units	<p>Determines the units of measurement used in quantity fields. Values are:</p> <ul style="list-style-type: none"> • Original (the units originally entered in the estimate) • U.S. • Metric

Field	Description
System	<p>These fields produce reports that summarize estimate costs by building system. To produce this report, you must first enter a system code for each cost item in the Work Category field on the detail item entry screen. Refer to Section 14.1 for information on the building systems classification method.</p> <p>Enter Y in each cost column to indicate which types of division summary reports to generate. Enter Y in each title-level column to indicate which levels of titles to include. (Level 0 provides a summary for the entire project.)</p>
2nd View	The 2nd View Report is part of the optional System Toolkit. See Chapter 8 in Volume 2.
Crew	<p>These fields generate backup reports that show the use of crews in the project.</p> <p>Enter Y in the Direct Column and under the 0 to generate the Detail Crew Report.</p> <p>Enter Y in each title-level column to generate crew summary reports for the indicated title levels.</p> <p>Note: To print a Crew, Labor, or Equipment Report, the Estimate Type field on the Name Project Columns Screen must be set to A (Crews with Auto Reprice) or C (CACES Mode).</p>
Labor	Enter Y in the Direct Column and under the 0 to generate a backup report listing all the labor cost items in the estimate.
Equipment	<p>Enter Y in the Direct Column and under the 0 to generate a backup report listing all the equipment cost items in the estimate.</p> <p>Note: To produce Labor and Equipment summary reports by title level, use the Crew title-level columns above.</p>

Field	Description
Prime Labor Cost Level	Enter the level desired to print a Labor Cost-to-Prime Backup Report listing the labor cost items, incorporating overtime, Adjust Pricing and subcontractor markups.

23.7 Print Selected Reports To

Purpose

The Print Selected Reports To option is used to print the currently selected project reports or send them to a file on disk. This option provides a means of displaying the Run Reports Window (Figure 23.6) directly from the Reports Menu.

Note: This option can also be used to print listings of the supporting databases. Refer to the next section for instructions.

Run Reports Window

Choosing this option from the menu displays the Run Reports Window, which is shown in Figure 23.6.

FUNCTION		REPORT SELECTION (PgDn to Print Selected Reports)	
1	HELP	Project Settings :	Profit Guidelines :
2	ADD	Contractor Settings :	Measurement Units : Original
3		Link Listing :	
4		Report Title : Military Example Project	
5		Print Device : LPT1	
6		Printer Setup : B - HP LJ II/III Landscape	
7	NOTES	2nd View : Y	
8	SELECT	Crew :	Y Y Y Y Y Y Y
9	MENU	Labor :	
10	EXIT	Equipment :	
		Prime Labor Cost Level :	
Enter a secondary title for the report(s). Optional. EST A PROJECT v5.29			

Figure 23.6: Run Reports Window

Procedure

Use these instructions to print the currently selected reports. Begin on the Main Menu Screen, with the highlight on the Project Database.

1. Press R to access the Reports Menu, then press L to choose the Print Selected Reports To option.

Result: The Run Reports Window is displayed.

Note: The Report Selection Screen is displayed in the background. If you want to check or change the currently selected reports, you can press the Esc key to dismiss the Run Reports Window and leave the background screen displayed.

2. Type in any field entries as needed if you want to add a secondary report title or change the destination of the reports. (Refer to the Field Descriptions below.)
3. Press the Page Down key.

Results The reports are printed, or else saved as a text file on disk. GOLD displays a message informing you when the processing is complete and indicating if any errors have occurred.

Notes:

- You can cancel printing at any time by pressing the Ctrl+End keys.
 - If errors occurred, they will be printed in the Error Report, which is appended to all GOLD reports.
4. Press Enter to dismiss the message and return to the Main Menu Screen.

Note: If you need to stop a report in progress, use the Control + End keys. This will stop processing.

Field Descriptions

This table describes the fields on the Run Reports Window.

Field	Description
Report Title	An optional secondary title to be printed in the page header of the report(s).
Print Device	<p>Printer port, such as LPT1 or PRN, to be used for printing. Alternately, you can enter the drive, directory, and file name of a text file to be stored on disk.</p> <p>Example: C:\RPTS\ESTIM.TXT</p>
Printer Setup	<p>This field shows the printer setup currently defined for your use.</p> <p>Printer setup information includes the type of printer and the control codes GOLD sends to the printer. The System Administrator maintains printer setup information through the Edit Printer Setup Table Screen, described in Section 25.3.</p> <p>If there is more than one printer setup available, you can press the F8 key to access a list of choices. Be sure the printer you choose is connected to the port specified in the Print Device field.</p>

23.8 Printing Database Listings

Purpose

This procedure can be used to print all or part of Unit Price, Crews, Labor Rates, and Equipment Rates Databases.

Note: To print all or part of an Assemblies or Models Database, you can use the Print Single Element function discussed in Section 20.1.

Report Menu Options

In order to print listings of these supporting databases, you first select one of the databases in the database window on the Main Menu Screen. You can then make use of the two options on the Reports Menu described in the previous two sections:

- Select Reports to Print allows you to choose the format and content of the database listings.
- Print Selected Reports To is used to actually print the listings.

Print Database Listing Screen

Choosing the Select Reports to Print option (with one of the four available databases highlighted) displays the Print Database Listing Screen, which is shown in Figure 23.7.

FUNCTION	Print Database Listing (Hit PgDn to Print Selected Reports)		
1 HELP	HEADING <input type="text"/>		
2 ADD	LIST	Unit Prices : NO - Exclude All	FROM <input type="text"/>
3 TITLES		Crews : NO - Exclude All	TO <input type="text"/>
4 EDIT		Labor Rates : YES - List All	
5 DETAIL		Equip Rates : NO - Exclude All	
6 LOOKUP	LISTING OPTIONS		
7 NOTES		Source(s) : Exclude	<input type="checkbox"/>
8 SELECT		Pricing Date : Include	87/88/94 Or Older
9 MENU		UPB Material Indicators : Yes	
10 EXIT		UPB Table of Contents : Yes	
		Formatting : Single Line Description	
Optional heading for the top of each page of the report(s)			
UNIT PRICES v5.29			

Figure 23.7: Print Database Listing Screen

Note on Long Listings

Supporting databases used with GOLD can be extremely large and can take a long time to print. You might want to select a portion of a database, to avoid printing data you don't need.

Procedure

Follow these instructions to print listings of the available supporting databases. Begin on the GOLD Main Menu Screen.

1. Move the highlight to one of the following databases: Unit Price, Crews, Labor Rates, or Equipment Rates.
2. Press R to display the Reports Menu. Then press R again to choose the Select Reports To Print option.

Result: The Print Database Listing Screen is displayed.

3. Fill in the screen as needed to specify the contents and format of the listing(s). Refer to the Field Descriptions below for details.
4. After completing the screen, press the Page Down key.

Result: The Run Reports Window is displayed.

5. If you want to change the print device, type in the change as needed. Then press the Page Down key.

Result: The listings are printed or sent to a disk file as specified. The program displays a message informing you when processing is complete.

6. Press Enter to dismiss the message and return to the Main Menu Screen.

Field Descriptions

Heading Field

Use this field to enter a title of up to 96 characters to be printed on the top of every page.

List Fields

These fields are used to select which supporting databases to print and which items in the selected databases to include or exclude.

For each of the listed databases, you can choose from the following options:

Option	Description
Yes - List All	Print all items in the database.
Include Range	Print only the items whose database IDs fall within the specified range. You then enter the range in the adjacent fields.
Exclude Range	Print all items in the database except those whose database IDs fall within the specified range. You then enter the range in the adjacent fields.
No - Exclude All	Do not print any items from this database.

Listing Options Fields

These fields are used to further specify the content of reports and to format the listings.

Field	Description
Source(s)	<p>These fields are used to include or exclude specific source IDs from the listing. Choose Include or Exclude in the first field, then enter one or more source IDs in the fields that follow.</p> <p>Example: You might choose to print only user-created items in a Unit Price Database listing. You would then choose Include and specify USR as the one source ID.</p>

Field	Description
Pricing Date	<p>These fields let you include or exclude items according to the date their prices were last updated. This option applies to the Unit Price Database (material prices) and to the Labor and Equipment Rates Databases.</p> <p>To use this option, choose Include or Exclude in the first field and then enter a date in the second field.</p> <p>The default is to include all items older than the current system date.</p>
UPB Material Indicators	<p>Enter Yes to include information about material price adjustment indicators entered at title levels. This option applies only to the Unit Price Database.</p> <p>For any titles where material adjustments are pending, the report will list the adjustment data. See Section 10.3 for more information.</p>
UPB Table of Contents	<p>Enter Yes to print a table of contents with the UPB listing.</p>
Formatting	<p>This field determines the formatting of the report or reports. Options are:</p> <ul style="list-style-type: none"> • Single Line Description - The report shows only a single line of data for each detail item. • Full Description - The report includes full listings of any additional Notes attached to items. • Unformatted Dump File - This option produces an ASCII text file of the report for the purposes of data transfer. It is not intended for printing, since the file will contain lines of more than 130 characters.

23.9 View Reports Using Viewer

Purpose

You can use this option to view reports on your screen prior to or instead of printing them.

About Viewer Programs

In order to use this option, you must have a viewer program designated for your use. This can be any program that enables you to view text files.

GOLD includes a default viewer program called CG_VIEWR.COM. This program allows you to view but not change text files. Its use is described below.

Your System Administrator can designate a different file viewer, text editor, or word processing program as your viewer program. This is done through the Edit Permission Settings option on the Admin Menu (Section 25.1). Text editors and word processors allow you to change the files, not just look at them.

When to Use

Use the View Reports Using Viewer option when you want to examine reports on your screen. The reports must first be stored in a text file on disk, using the Print Device field on the Run Reports Window.

Procedure

To view reports on the screen, use the following procedure, beginning on the Main Menu Screen with the highlight on the Project Database.

1. Press R to select the Reports Menu. Then press V to choose the View Reports Using Viewer option.

Result: A window is displayed showing the last entry made in the Print Device field on the Run Reports Window.

2. If this is the file location of the reports you want to view, press Enter.

If this is not the report file you want to view, first type in the path and file name, then press Enter.

Result: Your viewer program is accessed.

Note: Most viewer programs will automatically display the selected report(s). In some cases, you may need to use commands within the viewer to bring up the report file.

3. If you use CG_VIEWR.COM, refer to the instructions below. If you use a different program, refer to its documentation for further instructions.

Using CG_VIEWR.COM

CG_VIEWR.COM is an easy to use program for viewing text files. (It is actually a public domain program called BROWS2.COM.)

Once the program is accessed, the selected report or reports are automatically displayed. Use the following keys to move through the reports.

Key	Action
Left or Right Arrow	Move left or right through the text.
Up or Down Arrow	Scroll up or down within the report.
Page Up or Page Down	Move up or down one screen of text a time.
Home	Move to the beginning of the report file.
End	Move to the end of the report file.
Esc	Exit VIEWR.COM and return to GOLD.

23.10 List Material Backup / Vendor

Purpose

This option is used to print Material Backup and Vendor information for Unit Price Databases. This option is part of the Material and Vendor Backup capability, a component of the System Toolkit.

For More Information

For more information and instructions, refer to Section 9.5 in *Volume 2, Advance Options*.

23.11 Save / Load Report Settings

Purpose

The Save/Load Report Settings option is used to store report format and selection settings on disk, and to access settings that were previously stored.

When to Use

Use this option when you want to save the current report settings to disk, or to load report settings that have been stored for a particular project or kind of formatting.

Procedure

Use these instructions to save and/or load report settings. Begin on the Main Menu Screen, with the highlight on the Project Database.

1. Press R to access the Reports Menu. Then press T to choose the Save/Load Report Settings option.

Result: You are prompted to specify whether you want the currently defined settings saved.

2. If you want to save the current report settings, enter Y to confirm and then go to Step 3.

If you do not want to save the current settings, enter N and go to Step 4.

3. If you entered Y in Step 2, a window is displayed and you are prompted to enter the Match ID for saving the report settings. Enter an ID, Description, or both to identify the report settings you are saving, then press the Enter key.

Result: The settings are saved as specified.

Note: If report settings with the same ID have already been saved, you are prompted to confirm overwriting them. Enter Y to confirm or N to deny.

4. GOLD prompts you to specify whether you want to load a different set of report settings. Enter Y to confirm or N to deny.

Results:

- If you entered N, you are returned to the Main Menu Screen. This ends the procedure.
 - If you entered Y, the Find Keyword Menu is displayed. Press PgDn to see a window showing the IDs and Descriptions of all stored report settings. Go to Step 5.
5. Move the highlight to the ID of the report settings you want to load. Then press the Enter key.

Result: The selected report settings are loaded. The Main Menu Screen is redisplayed.

23.12 The Detail Report

Description

The Detail Report provides a complete listing of an entire estimate. This report shows every cost item and title in the project and lists their Direct Costs.

You can specify the exact content and formatting of this report by using the Detail Report Formatting Screen, as discussed in Section 23.3.

Cost Markups

The costs shown for detail items on the Detail Report differ from the costs shown for the same detail items on Project Database screens. The costs in the Detail Report include the following markups:

- Any markups specified through the Adjust Pricing Screen accessed from the Compute Menu.
- Sales Tax added to material, according to the amount specified on the Report Titles Page Screen.
- Markups for any contractors up to, but not including, the prime contractor responsible for the work. That is, the costs shown are the costs to the prime contractor.

Exception: If you choose to print a unit cost row on the Detail Report (as in Example 1, below), the costs shown in that row only do not include subcontractor markups.

These same cost markups are reflected in the summary costs shown for titles in both the Detail Report and in Project Summary Reports. The markups are also included in the summary costs shown on title list and entry screens in the Project Database (once the estimate has been recalculated).

Detail Report Example 1

Figure 23.8 shows a section of the Detail Report for the DEMAIR Project.

BSD						
International Airport Remodel - from Intermediate Construction						
DETAILED ESTIMATE			DETAIL PAGE 1			
001. BUILDING CONSTRUCTION						
001-01. FOUNDATIONS	QUANTITY	UOM	MATERIAL	LABOR	OTHER	TOTAL COST
STANDARD FOUNDATIONS						
SPREAD FOOTINGS						
WALL FOOTINGS						
EXCAVATION W/ 1/2CY	481.00	CY	0.00 0	1.35 766	1.26 715	2.61 1,481
TRIM BOTTOM OF EXCAVATION	2786.00	SF	0.00 0	0.19 625	0.08 263	0.27 887
BACKFILL & COMPACT W/F.E. LOADER	332.00	CY	0.00 0	2.37 928	1.49 584	3.86 1,512
HAUL SURPLUS EXCAVATION OFF SITE	149.00	CY	00.0 0	1.24 218	2.51 441	3.75 659
FORMWORK - 3 USES	2786.00	SF	0.39 1,266	1.30 4,273	0.05 164	1.74 5,704
4000 PSI CONCRETE PLACED BY	487694 106.00		12.72 6,089	2.12 1,591	63.53 265	7.944
#3 - #7 REINFORCEMENT GRADE 60	4400.00	LB	0.30 1,555	0.18 934	0.00 0	0.48 2,490
CURING W/BURLAP - 4 USES	2876.00	SF	0.02 760	0.05 164	0.00 0	0.07 235
WALL FOOTINGS			8,980	9,500	2,432	20,912
ELEVATOR PIT FOOTINGS						
HAUL SURPLUS EXCAVATION OFF SITE	217.00	CY	0.00 0	1.24 317	2.51 643	3.75 960
FORMWORK TO EDGE - 1 USE	811.00	SF	1.05 1,003	2.00 1,914	0.07 67	3.12 2,984

Figure 23.8: Sample Detail Report (Portion)

Analysis of Example 1

Example 1 is formatted according to the specifications entered on the Detail Report Formatting Screen illustrated in Figure 23.2. If you compare the two figures, you can see the following:

- Titles are printed at levels 3, 4, and 5 of the estimate. (Levels 1 and 2 are not selected since these titles are automatically printed in the headings of each page.)
- Totals are printed at Levels 3-6. The total shown is for the Level 5 title, "Wall Footings."
- No Notes are printed on the report.
- The Unit Cost row is printed above each cost item. (Contrast with Example 2, below.)

- Cost Codes are not printed with items.
- No optional columns or UPB Titles are printed.

Report Example 2

Figure 23.9 shows the same portion of the Detail Report as is shown in Example 1. The only difference is that the Unit Cost row is not printed with the detail items.

Normally, you would print the unit cost row for working versions of reports and not print it on reports intended for presentation.

BSD International Airport Remodel - from Intermediate Construction						
DETAILED ESTIMATE			DETAIL PAGE 1			
001. BUILDING CONSTRUCTION						
001-01. FOUNDATIONS	QUANTITY	UOM	MATERIAL	LABOR	OTHER	TOTAL COST
STANDARD FOUNDATIONS						
SPREAD FOOTINGS						
WALL FOOTINGS						
EXCAVATION W/ 1/2CY	481.00	CY	0	766	715	1,481
TRIM BOTTOM OF EXCAVATION	2786.00	SF	0	625	263	887
BACKFILL & COMPACT W/F E. LOADER	332.00	CY	0	928	584	1,512
HAUL SURPLUS EXCAVATION OFF SITE	149.00	CY	0	218	441	659
FORMWORK - 3 USES	2786.00	SF	1,266	4,273	164	5,704
4000 PSI CONCRETE PLACED BY	106.00	CY	6,089	1,591	265	7,944
#3 - #7 REINFORCEMENT GRADE 60	4400.00	LB	1,555	934	0	2,490
CURING W/BURLAP - 4 USES	2876.00	SF	760	164	0	235
WALL FOOTINGS			8,980	9,500	2,432	20,912
ELEVATOR PIT FOOTINGS						
HAUL SURPLUS EXCAVATION OFF SITE	217.00	CY	0	317	643	960
FORMWORK TO EDGE - 1 USE	811.00	SF	1,003	1,914	67	2,984

Figure 23.9: Sample Detail Report (Portion)

23.13 Project Summary Reports

Description

Project summary reports summarize cost information for an estimate. You can produce project summary reports that break down the estimate by Project Direct, Indirect, and Owner Costs. On all of these reports, you can show the cost breakdown to whatever title level you choose.

Example 3: Project Owner Summary Report

Report Example 3 (Figure 23.10) shows the Project Owner Cost summary section of the report for the DEMAIR project, broken down to title Level 1.

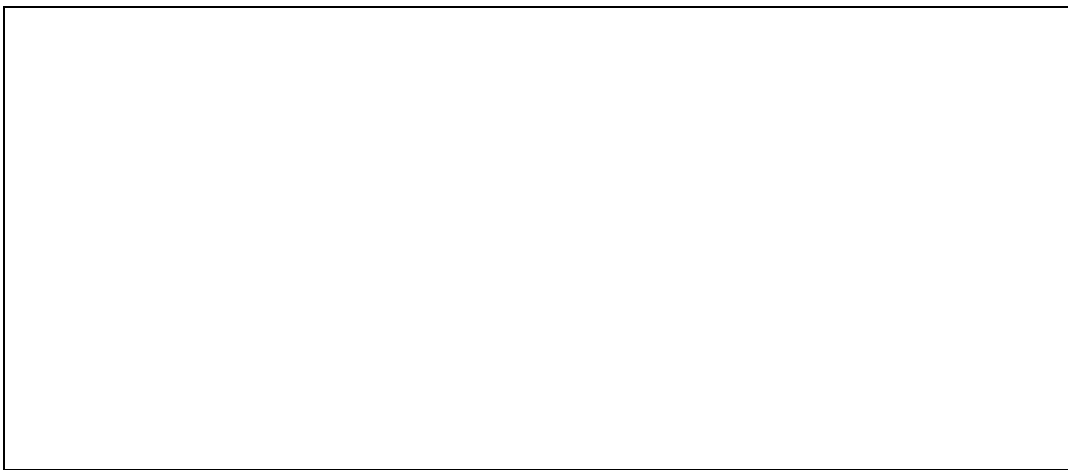


Figure 23.10: Project Owner Summary Report

Analysis of Example 3

The sample Project Owner Summary Report contains the following parts:

- The leftmost column shows the Level 1 titles defined for the DEMAIR project. You could choose to show increasingly detailed breakdowns by entering Y for additional title levels on the Report Selection Screen.
- The Quantity/UOM column shows the quantity and unit of measure values as entered on the entry screen for the Level 1 titles.
- The Contract column indicates the sum of all Direct and Indirect Costs attributed to each Level 1 title. These costs are broken out in the following two examples.
- The next five columns are the Owner Cost columns defined for the project on the Name Project Columns Screen.

- The value in the Total Cost column for each title is the sum of the preceding six columns.
- The Unit column shows the unit cost for each Level 1 title, figured as the Total Cost divided by the title Quantity value.
- The sum of the Total Cost column on the bottom row represents the total amount of the estimate, since it includes all Direct, Indirect, and Owner Costs.

Example 4: Project Indirect Summary Report

Report Example 4 (Figure 23.11) shows the Project Indirect Costs summarized at title Level 1.

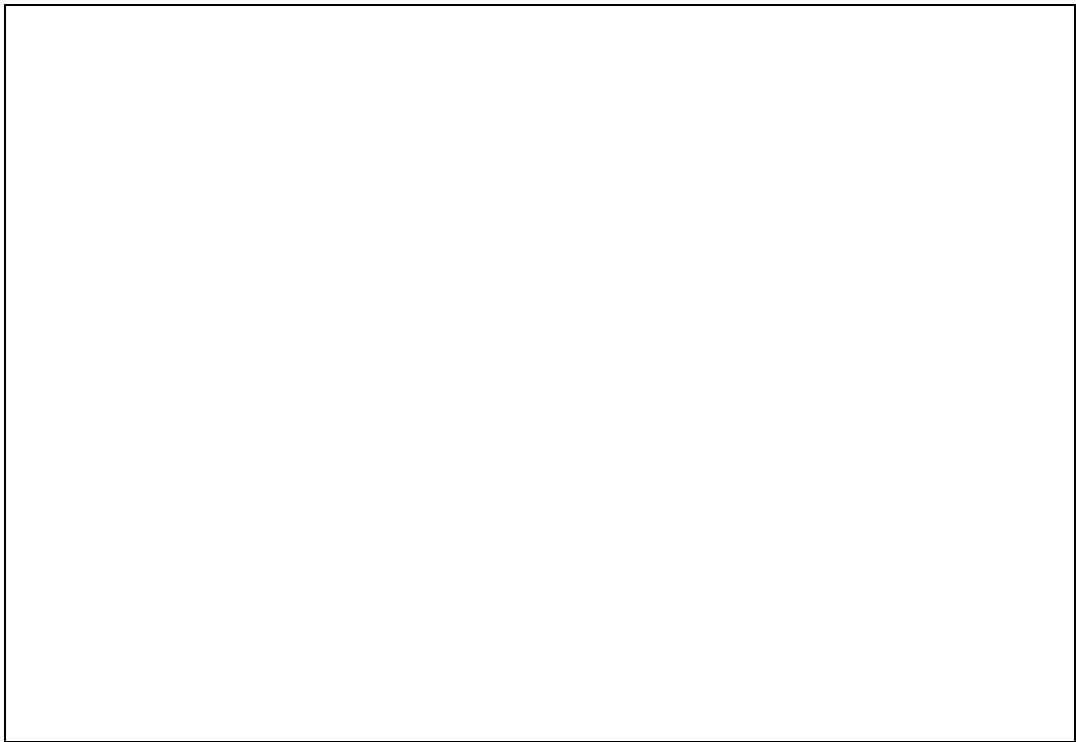


Figure 23.11: Project Indirect Summary Report

Analysis of Example 4

The Project Indirect Summary Report for the DEMAIR project contains the following elements:

- Again, the leftmost column shows the Level 1 titles defined for the DEMAIR Project. This is again followed by a column showing the titles' Quantity and Unit of Measure figures.
- The Direct column indicates the sum of all Project Direct Costs for each title. (The Direct Costs are shown in separate columns in Report Example 5.) This column's costs includes cost markups for subcontractors' work, as noted below.
- The next four columns, Overhead, Home Office, Profit, and Bond, are the Indirect Cost columns defined on the Name Project Columns Screen. On this report, they show the total of each cost markup for the project's prime contractor only. Subcontractors' markups are rolled into the Direct Costs and are reflected in the Direct column. (Subcontractors' markups are listed separately in the Contractor Indirect Summary Report, described in the next section.)
- The Total Cost for each title is the sum of the preceding five columns. Notice that these costs are the same for each title as the corresponding figures in the Contract Column in Report Example 3, since both represent the sum of Direct and Indirect Costs.
- As in Example 3, the Unit column shows the unit cost for each Level 1 title, figured as the Total Cost divided by the title Quantity value.
- Below the Total Cost column, the Project Owner Costs are added, one at a time, and the resulting Subtotals listed. Notice that the labels for the Owner Costs are slightly different from those shown in Example 3. These are the extended titles entered for each Owner Cost column on the Other Report Formatting Screen (Figure 23.3).
- Finally, notice that the Total Including Owner Costs figure is the same as the sum of the Total Costs in Example 3. Again, this represents the total for the estimate.

Example 5: Project Direct Summary

Report Example 5 (Figure 23.12) shows the Project Direct Summary Report for the DEMAIR project, broken down to title Level 1.

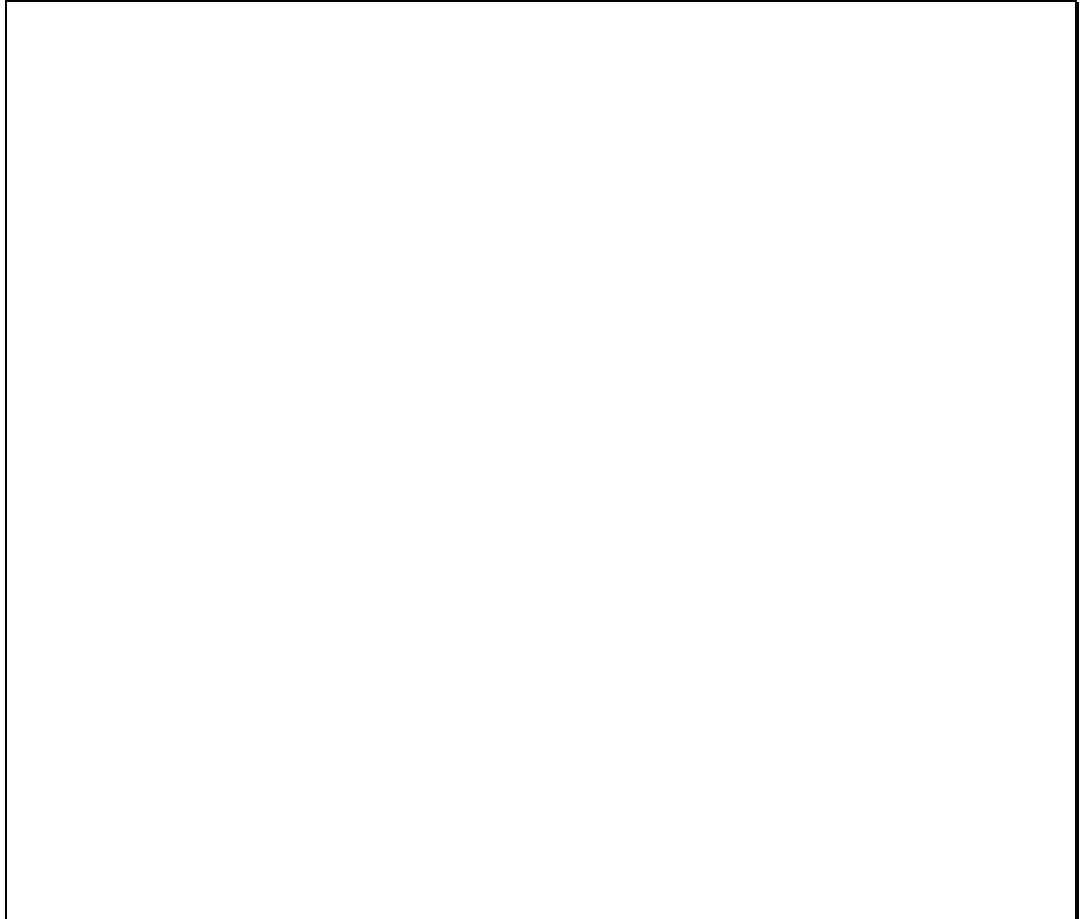


Figure 23.12: Project Direct Summary Report

Analysis of Example 5

Example 5 is similar in its components to Example 4. The main differences are as follows:

- The individual cost columns show the Direct Costs defined for the DEMAIR Project: Material, Labor, and Other. As mentioned previously, the costs shown include subcontractor markups and therefore represent the costs to the prime contractor. The Material Costs include the Sales Tax markup of 7% as defined on the Report Title Page Screen for the project.
- The costs added below the Total Cost column now include the Indirect Costs as well as the Owner Costs, with the Indirect Costs added in first. Once again, the extended column titles are used.

23.14 Contractor Summary Reports

Description

Contractor summary reports list the costs associated with each contractor in an estimate. Reports are available for Project Direct and Indirect Costs, and can be generated for the detail level and any title level in the project.

Example 6: Contractor Indirect Summary Report

The Contractor Indirect Summary Report shows a breakdown, by contractor, of all the Indirect Costs computed for a project. Figure 23.13 shows an example of a portion of the Contractor Indirect Summary Report for Level 1 of the DEMAIR Project.

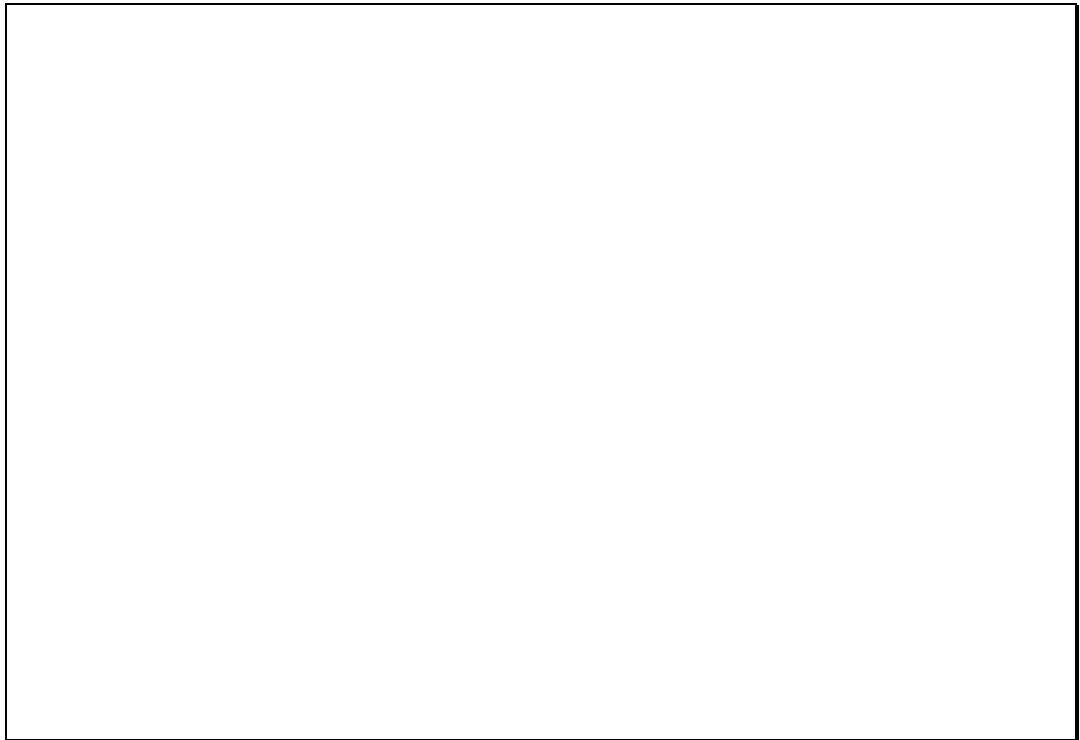


Figure 23.13: Contractor Indirect Summary Report (Portion)

Analysis of Example 6

Example 6 has the following elements:

- The leftmost column shows the Level 1 titles defined for the DEMAIR Project. Beneath each title, the contractors assigned within that project element are listed with their two-character contractor IDs.
- The Direct column shows the sum of the Direct costs for work performed by each contractor.
- The next four columns are the Indirect Cost Columns defined for the Project on the Name Project Columns Screen. On this report, the columns show each contractor's markups on the associated Direct Costs.
- The Total Cost for each row is the sum of the preceding five columns. A Unit Cost column, based on each title's Quantity value, is also shown.
- Subcontractors' IDs and names are indented under their parent contractors. Under the first title, Building Construction, the Prime Contractor (PM) is listed, followed by listings for his subcontractors BC and ME.
- Following a list of indented subcontractors, the next row shows the subtotals for the parent contractor for subcontracted work. Under Building Construction, the row is labelled "PM Subtotal Subcontract Work."
- The next row ("labelled PM Indirect on Subcontracts") shows the cost markups of the parent contractor on his subcontractors' work. Notice that the Total Cost from the previous row becomes the Direct Cost for this row (16,391,026 in the example). That is, the total cost of subcontracted work, including the subcontractors' markups, becomes the total Direct Cost to the parent contract. In the rest of this row, the parent contractors markups on this subcontracted work are added in.
- The following row ("PM Indirect on Own Work") shows the Direct Costs for work under this title performed by the parent contractor, and his markups on that work.
- Finally, the preceding two rows are added to show the total of the Direct Costs and markups for the parent contractor for this title element.

Example 7: Contractor Direct Summary Report

The Contractor Direct Summary Report is similar to the Contractor Indirect Summary report, except that the Direct Cost columns defined for the project are shown. Figure 23.14 shows an example section of this report at title Level 1.

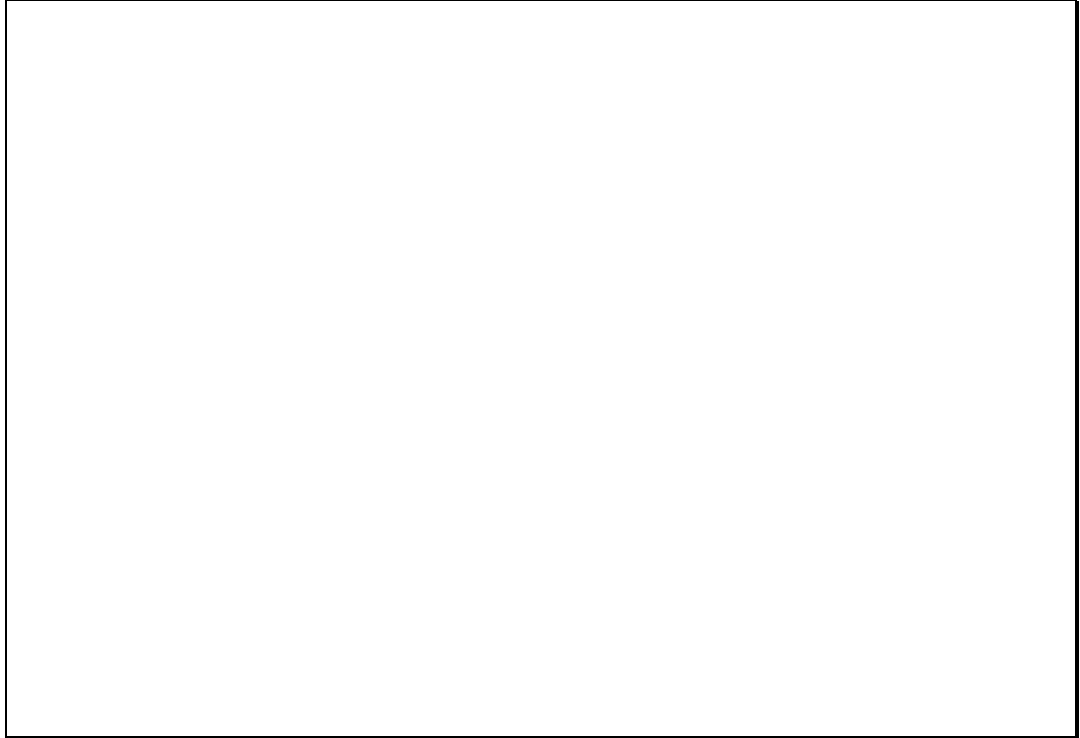


Figure 23.14: Contractor Direct Summary Report (Portion)

Analysis of Example 7

Notice the following about Example 7:

- Subcontractors' Direct Costs are printed in indented rows beneath the names of their parent contractors. The Direct Cost columns are the ones defined on the Name Project Columns Screen.
- A subtotal line is then printed ("Subtotal Subcontract Work"). This line shows the totals for the parent contractor's subcontracted work. This line does not include any Indirect Cost markups.
- The next line ("Subcontracts Incl Indirect") shows the totals for the subcontracted work with the subcontractors' markups included. (These costs, including the markups, are considered Direct Costs to the parent contractor.)
- If appropriate, the next line (labelled "Contractor's Own Work") shows the Direct Costs for work performed by the parent contractor.
- Finally, the total line for each title shows the total Direct Costs in each column for the parent contractor.

23.15 Division Summary Reports

Description

Division summary reports break down a project's costs according to the 16 Construction Specifications Institute (CSI) Divisions. These divisions are the same as the Level 1 titles in the supplied Unit Price Database.

These reports accumulate project cost items with a database ID that places them within a CSI division. That is, the first two characters of their database ID matches one of the UPB Level 1 titles. Items with missing or non-matching IDs are accumulated and shown in a Not Identified category on the report. Items with cost overrides at a title level are not listed.

You can produce division summary reports of Project Direct, Indirect, and Owner Costs, showing costs at the detail level and any title level.

Example 8: Division Direct Summary Report

Report Example 8 (Figure 23.15) illustrates part of a title Level 1 Division Direct Summary Report for the DEMAIR project.

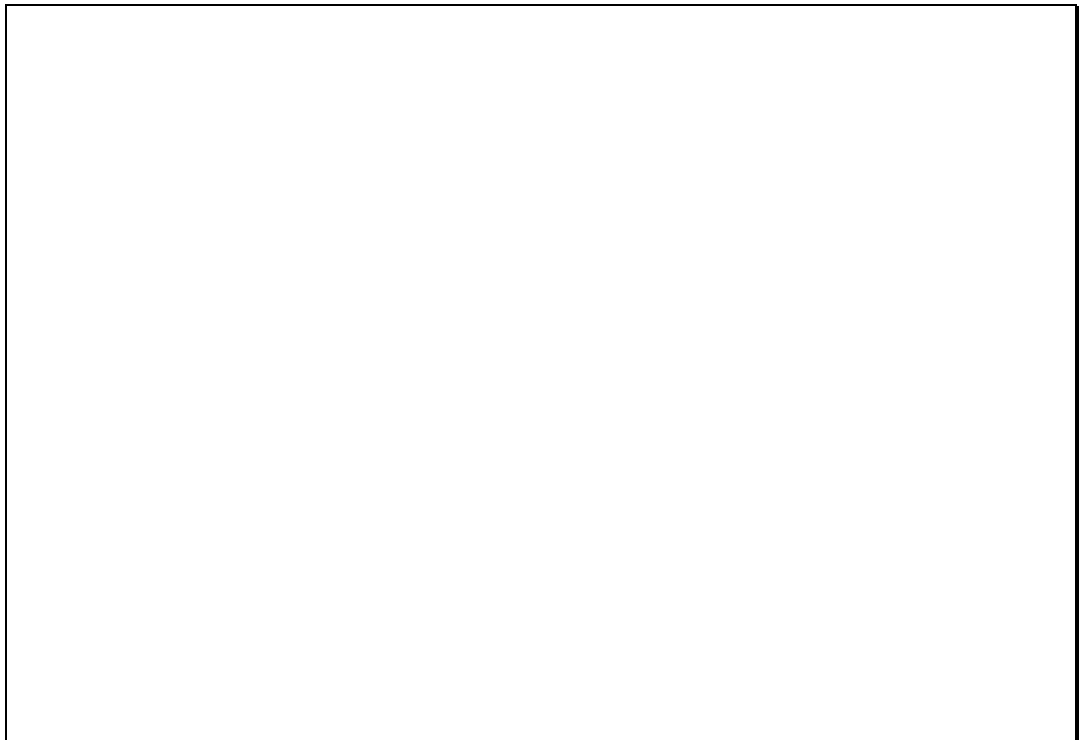


Figure 23.15: Division Direct Summary Report (Portion)

Analysis of Example 8

Following are the components of Report Example 8:

- The leftmost column shows the Level 1 titles.
- For each title, the report then lists the CSI Divisions for which cost items are defined.
- The cost columns show the Direct Costs defined for the Project. The figures in each column represent the accumulated costs for the title of all cost items belonging to the specified CSI division.

Division Indirect Summary Report

The Division Indirect Summary Report is similar to the Direct Summary Report except that the Indirect Cost columns defined for the project are shown.

The first cost column shows the total Direct Cost for each CSI Division, and the subsequent columns show the various markups on those Direct Costs. The Total Cost column represents the sum, per CSI division, of all Direct and Indirect Costs.

Division Owner Summary Report

The Division Owner Summary Report shows the Owner Cost columns defined for the project.

The first cost column shows the total of Direct and Indirect Costs for each CSI Division. Subsequent columns list the various Owner Costs as distributed over those summed costs. The Total Cost column represents the sum, per CSI Division, of all Direct, Indirect, and Owner Costs.

23.16 System Summary Reports

Description

System summary reports break down a project's costs according to the 16 system codes of the building systems classification. The 16 building systems represented by these codes are the same as the Level 1 titles in the supplied Assemblies Database. (Refer to Section 14.1 for more information.)

The system summary reports classify cost items according to the value in the Work Category field on the detail item entry screen. For this report to be valid, the first two characters in the Work Category field must equal the system code for the appropriate building system. (If you work with the supplied Assemblies Database, GOLD automatically fills the Work Category field according to the title hierarchy of that database. In other cases, you can fill in the Work Category field as needed.)

You can produce system summary reports of Project Direct, Indirect, and Owner Costs, showing costs at the detail level and any title level.

Example 9: System Direct Summary Report

Report Example 9 (Figure 23.16) illustrates part of a title Level 1 System Direct Summary Report for the DEMAIR project.

Wed 20 Jul 1994		U.S. Army Corps of Engineers		TIME 10:16:54	
Eff. Date	05/13/92	PROJECT DEMAIR: International Airport Remodel			
Example Renovations Estimate				SUMMARY PAGE 2	
** SYSTEM DIRECT SUMMARY - Bid Item **					

		MATERIAL	LABOR	OTHER	TOTAL COST

BUILDING CONSTRUCTION					
01	Substructure	370,025	291,028	180,641	841,694
02	Structural Frame	143,344	111,785	22,563	277,691
03	Roofing	2,617,452	965,844	284,282	3,867,577
04	Exterior Closure	649,810	440,885	12,905	1,103,600
05	Interior Construction	412,950	77,092	9,504	499,546
06	Interior Finishes	1,706,361	796,841	230,530	2,733,732
07	Specialties			6,218,000	6,218,000
08	Plumbing	897,783	991,803	2,504,378	4,393,964
09	Heating,ventilation & Air Condit	1,356,984	356,812	959,427	2,673,222
		8,154,708	4,032,089	10,422,229	22,609,026

SITework					
12	Special Interior Electrical Syst	1,124,513	1,013,630	674,802	2,812,944

Figure 23.16: System Direct Summary Report (Portion)

Analysis of Example 9

Report Example 9 includes the following parts:

- The leftmost column shows the Level 1 titles.
- For each title, the report then lists the building systems to which cost items are attributed in their Work Category fields.
- The cost columns show the Direct Costs defined for the Project. The figures in each column represent the accumulated costs for the title of all cost items belonging to each building system.

System Indirect Summary Report

The System Indirect Summary Report is similar to the Direct Summary Report except that the Indirect Cost columns defined for the project are shown.

The first cost column shows the total Direct Cost attributed to each building system, and the subsequent columns show the markups on those Direct Costs. The Total Cost column represents the sum, for each system, of all Direct and Indirect Costs.

System Owner Summary Report

The System Owner Summary Report shows the Owner Cost columns defined for the project.

The first cost column shows the total of Direct and Indirect Costs for each building system. Subsequent columns list the various Owner Costs as distributed over those summed costs. The Total Cost column represents the sum, for each system, of all Direct, Indirect, and Owner Costs.

23.17 Shipping Summary Report

Description

The Shipping Summary Report provides a listing of the shipping costs for materials in a Project Database. The costs are summarized by CSI Division.

Producing the Report

The Shipping Summary Report is automatically produced when you choose to generate either project summary reports or a Detail Report, provided that the following are true:

- Shipping is selected as a predefined Direct Cost column for the project.
- A shipping rate has been entered on the Adjust Pricing Screen and non-zero shipping costs have therefore been generated and stored in the project.

Refer to Section 6.8 for instructions on working with shipping costs.

23.18 Backup Reports

Description

Backup reports provide additional information about a project by showing the utilization of crews, labor, and equipment.

You can produce a Crew Detail Backup Report as well as summary reports for crews, labor items, and equipment items at any title level.

To generate backup reports, the Estimate Type must be set to either A (Crews with Auto Reprice) or C (CACES Mode).

Example 10: Detail Crew Report

Report Example 10 (Figure 23.17) shows part of the Detail Crew Backup Report for the sample MILEXM Project. The first three crews listed on the report are shown.

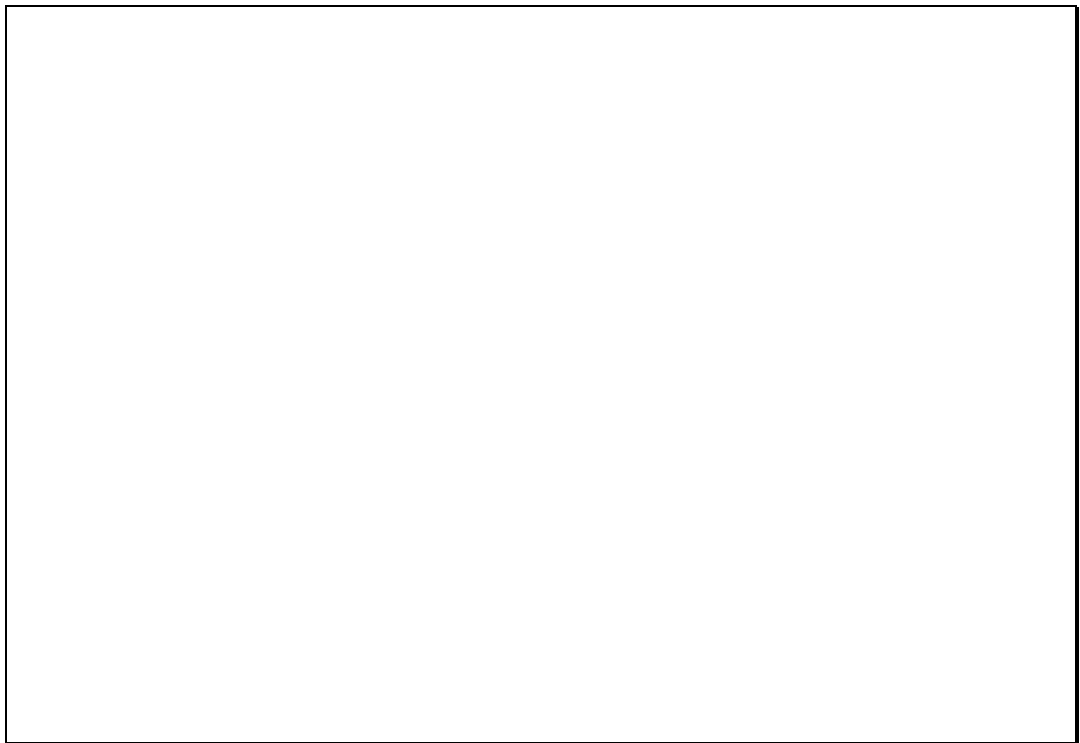


Figure 23.17: Detail Crew Backup Report (Portion)

Analysis of Example 10

Example 10 includes the following elements:

- For each crew, a subheading shows the Crews Database ID of the crew and its Description. The Productivity figure stored for the Crew in the Crews Database and used to adjust each project cost item is also shown. The Crew Hours figure shows the total number of hours that this crew is used in the entire project.
- Below the subheading, each member of the crew is listed. The information shown is the detailed data stored for each member in the Crews Database.
- The Total row below each crew shows the total hours and hourly cost for all labor and equipment members, as well as the total hourly cost for the entire crew.

Crew Summary Reports

Crew Summary Reports can be produced for any title level of the project.

For each title, these reports list the crew ID, description, productivity value, and the total hours worked by the crew in the particular project element represented by the title.

Labor Backup Reports

Labor backup reports list labor cost items used in the estimate. These items are crew members belonging to crews used by project items. The labor items are stored as individual detail items in the Labor Rates Database.

For each labor item, the report shows the detail information stored in the Labor Rates Database, including Base Rate, Overtime, Taxes and Insurance, etc. The report also lists the number of hours each labor item is used.

You can produce reports that summarize the entire project or summary breakdowns for any title level.

Labor Cost-to-Prime Backup Report

The Labor Cost-to-Prime backup report lists labor cost items used in the estimate. These items are crew members belonging to crews used by project items or labor IDs that are individual detail items. Under each selected project title, the report lists for each Labor ID type: the Labor ID from the Labor rates database, the Labor ID description, the Labor type (Laborer, Foreman or Apprentice), the number of hours this ID is called for under this title, the database rate, the extended amount of the hours times the database rate, the Cost-to-Prime rate (which includes Overtime, Adjust Pricing, and Subcontractor Markups), and the extended amount of the hours times the Cost-to-Prime rate.

Equipment Backup Reports

Equipment backup reports list the equipment items in the estimate. These items are the equipment crew members used by project cost items and stored in the Equipment Rates Database.

For each item, the report shows detailed information from the Equipment Rates Database as well as the total number of hours each item is used.

As with labor backup reports, you can produce equipment reports for an entire project or summary breakdowns by title level.

23.19 Settings Reports

Description

Settings reports are selected from the top rows of the Report Selection Screen. These reports provide supporting information about an estimate by listing the software settings used to determine various aspects of project structure.

Three separate settings reports are available:

- Project Settings Report
- Contractor Settings Report
- Link Listing Report

Note: The Link Listing Report is only available with the optional Models Module and is described in *Volume 2, Advanced Options..*

Project Settings Report

The Project Settings Report lists all the entries currently recorded for the project on the following screens:

- Name Project Columns
- Set Breakdown Structure
- Detail Report Formatting
- Other Report Formatting
- Report Selection

In addition, this will automatically generate a report called the Owner, Overtime, and Adjustments Settings Report. This report will list any Owner Cost Markups applied at the default Owner Cost level, as well as any Owner Cost markups that have been applied at the lowest title level. In addition to the Owner Cost markups, the settings report will print any title on which Overtime has been applied, displaying the Overtime information that has been input on the OTHER screen at the lowest title level. (This includes days per week, hours per day, hours per shift, shifts per day, and the overtime percentage for labor.) Any titles for which adjustments have been made using the Adjust Pricing screen will also be printed, along with the requested adjustments as displayed on the Adjust Pricing screen.

Contractor Settings Report

The Contractor Settings Report lists each contractor in the project. For each contractor, the method chosen to compute each Indirect Cost column is shown, along with the currently set percentage, separate percentage, or amount.

If the compute method is used for figuring profit, the values entered for the various weighting factors are also listed (see Section 7.4).

Profit Weighted Guidelines Report

The Profit Weighted Guidelines Report may be selected to display the weights attached to each risk factor, when the Compute method is used to calculate the Profit for a contractor. The report displays the Risk Factor, the Rate (percentage out of 100 that this factor carries), the Weight of each factor (from .03 to .12), and the resulting value for each risk factor. The user can also attach notes, using the F7 function key from the Profit Weighted Guidelines screen. Typically these notes will describe the reasons for each of the weights assigned to the risk factors.

CHAPTER 24

SERVICES

Purpose

The Services Menu is used to manage GOLD databases. It provides functions for selecting databases, storing and retrieving databases from disk, and other management tasks.

Accessing the Menu

You access the Services Menu from the Main Menu Screen, by pressing the S key. The menu is illustrated in Figure 24.1.

Refer to Section 3.8 for general information about the database menus.

Figure 24.1: The Services Menu

Chapter Overview

This chapter explains how you can choose more than one database to work with through the Services Menu. The chapter then describes each menu option and how it is used.

24.1 Choosing Multiple Databases

When to Use

Some of the options on the Services Menu work with one database at a time. Other options can be applied to one or several databases simultaneously.

This section provides general instructions for choosing multiple databases. Use these instructions when you want to apply Services Menu options to more than one database at a time.

Procedure

Follow these steps to select multiple databases to work with, starting at the Main Menu Screen.

1. Press the S key to access the Services Menu. Then move the highlight to the option you need and press Enter.

Result: A window is displayed listing the drive, directory, and ID of the database that was highlighted in the database window.

Note: In some cases, a different window is displayed first, and the selection window is displayed only after you have given the program other input.

2. If you need to work with databases in a different drive or directory, type in the new path.

If you want to select multiple databases in the displayed directory, delete the database ID.

3. Press the F8 key.

Result: A window is displayed listing all the databases in the specified path. To the left of each item is a one-letter code indicating the type of database:

E - Equipment Rates

4. Use the Arrow keys to move the highlight up and down. To select a highlighted database, press the Space Bar.

Result: A check mark appears next to the database.

You can also cancel selection by pressing the Space Bar a second time.

5. When you have marked all the databases you want to work with, press the F8 key.

Result: The program issues additional prompts, or else performs the option you requested from the Services Menu on the selected databases. The program then returns to the Main Menu Screen.

24.2 Select a Database

Purpose

This option is used to select a database to be displayed in the database window on the Main Menu Screen. You can use this option to select databases for any of the seven database types.

When to Use

Use this option when you need to select a database of a particular type, in a drive or directory different from the one currently shown in the database window.

If you need to select a database of a particular type in the same drive and directory as the one currently listed, you can use the F8 key, as described below.

Using the F8 Key to Select

To select a database from the same drive and directory as the one currently listed, do the following:

1. Highlight the current database and press the F8 key.

Result: The program opens a window listing the available databases for that drive and directory. For each database, the size and date of creation are shown.

2. Move the highlight to select the database you need, then press the Enter key.

Result: The program displays the Main Menu Screen with the chosen database shown in the database window.

Note: When selecting a new Project database, you are asked "Select PROJECT XXXXXX Related Databases? (Y/N) N" If you answer Y, then the software will automatically select the databases that were last used to reprice this project. If those databases are not located on your system, then the system will leave that path highlighted and no databases loaded. If you always use the same supporting databases for all of your projects, you should answer N to this question. If your databases become deselected by mistake, use the Select a Database under the Services menu to reselect the databases you need.

Using the Select a Database Option

To select a database from a different drive and directory, follow these steps. Begin on the Main Menu Screen, with the highlight on the database type that you need to select.

1. Press the S key to access the Services Menu.
2. Press S to choose the Select a Database option.

Result: A window is displayed listing the path and ID of the currently selected database.

3. Type over the current information with the drive and directory from which you need to select the database. Then press Enter.

Result: A window is displayed listing all the databases in the chosen directory.

Note: If there are no databases in the directory, the Main Menu Screen is redisplayed, with the message "(Not Located)" shown in the Name column of the highlighted database type. You must then repeat this procedure and choose a different path.

4. Move the highlight to select a database from the list, then press Enter.

Result: The database window is redisplayed, with the highlight on the database you have selected.

Note: When selecting a new Project database, you are asked "Select PROJECT XXXXXX Related Databases? (Y/N) N" If you answer Y, then the software will automatically select the databases that were last used to reprice this project. If those databases are not located on your system, then the system will leave that path highlighted and no databases loaded. If you always use the same supporting databases for all of your projects, you should answer N to this question. If your databases become deselected by mistake, use the Select a Database under the Services menu to reselect the databases you need.

24.3 Copy a Database

Purpose

This option is used to copy a database to a different drive, directory, or to a new database ID. The database is copied in uncompressed form, in contrast to the Save To and Load From Compressed options, which are described in the next two sections.

Procedure

Use this procedure to copy a database. Begin on the Main Menu Screen, with the highlight on the line of the type of database that you want to copy.

1. Press the S key to access the Services Menu.
2. Press Y to choose the Copy a Database option.

Result: A window is displayed listing the current database with its drive and directory.

3. If this is the database you want to copy, press Enter.

If you want to copy a different database, type its ID. Change the drive and directory if necessary. (You can specify either a hard or floppy disk drive.) Then press the Enter key.

Note: Once the correct drive and directory are specified, you can press the F8 key to select the database from a list window.

Result: A window is displayed prompting you to enter the drive, directory, and ID where the database is to be copied. The drive and directory of the currently highlighted database is shown as the default.

4. Type in the destination path and ID for the copy. You can specify either a hard or floppy drive. The database ID must be 6 characters in length. It may include letters, numbers, hyphens, and underscores, but no other symbols or spaces.

Press the Enter key.

Result: The database is copied to the chosen destination. The Main Menu Screen is redisplayed.

24.4 Save To Compressed

Purpose

This option is used to save one or more databases to compressed files on floppy disk or hard disk. The selected databases are automatically compressed using the PKZip(R) utility. To retrieve the databases and expand them, you must use the Load From Compressed option.

You can use this option to save databases too large to fit on a single floppy disk. The program will prompt you to enter additional disks during the save.

Indexes are Removed

To save space, the database indexes are removed when you save in compressed format.

If you later expand and then load the database, the indexes will be automatically reconstructed the first time you choose the restored database from the Main Menu Screen.

Preparing Floppy Disks

If you are saving to floppy disk, the number of floppy disks needed depends on the size of the database(s) and the storage capacity of the disks. The floppy disks must be formatted before you start the Save process.

Floppy Disks Containing Other Files

If you try to save to a floppy disk containing files other than compressed GOLD database files, the program prompts you as to whether you want to delete the files on the disk.

- If you enter Y, the files are deleted and the Save process proceeds.
- If you enter N, you are prompted to take out the floppy disk and insert another.

Saving a Project With Related Databases

If you are saving only a single Project Database, you can choose to automatically save the supporting databases related to that project, regardless of which directories the related databases are in.

This option saves the Unit Price, Crews, Labor Rates, and Equipment Rates Databases related to the specified Project Database. In this case, *related* means that these databases were used to reprice the Project Database. If the Project Database was never repriced, then the system will not find the related databases automatically.

You can use this option to save compressed databases either to floppy disk or to a hard disk.

Basic Procedure

Following are the basic instructions for saving one or more databases to compressed data files. Begin on the Main Menu Screen.

Note: If you are saving one or more databases to a set of floppy disks that already contain compressed GOLD databases, extra steps are required. Refer to the additional procedure presented below.

1. Press the S key to access the Services Menu. Then press T to choose the Save to Compressed option.

Result: A window is displayed prompting you to enter the path and ID of the database to be saved. The path of the database currently highlighted in the database window is displayed as the default.

2. If you want to save one or more databases from this path, press the F8 key. If you want to save databases from a different path, first type in the new path, then press the F8 key.

Result: A window is displayed listing all the databases in the specified path.

3. Highlight any database(s) that you want to save and press the Space Bar to mark them with a check mark.
4. Press the Enter key.

Result: A window is displayed prompting you to specify the path where the compressed data files should be saved. The default is the root directory on the A (floppy disk) drive.

5. Type in the drive and directory for storing the compressed files, or press Enter to accept the default.

Results:

- If compressed data files already exist in the selected path, a window is displayed listing the stored databases. Highlight and then press the Space Bar to remove the check mark from any stored databases you do *not* want to keep. Then press the Enter key.
- If you are saving a single Project Database which has related databases, you are prompted to specify whether you want the related databases saved to the same compressed file. Press Y to confirm or N to deny.

If Yes, you will be presented with a list of the databases last used to reprice this estimate. Highlight and press the Space Bar to remove the check mark from any of the related databases you do not want to save.

- A series of messages is displayed as the database files are compressed and stored.
- If you are saving to floppy disk and there is not enough room on the disk, you are prompted to insert additional disks as needed, and the processing continues.

Note: Be sure to number the floppy disks, so they can later be loaded in the correct order.

- When all of the data has been saved, the program returns to the Main Menu Screen and issues a message that the Save to Compressed process is complete.

Saving to Floppy Disks Containing Databases

Follow these instructions to save one or more databases to a set of floppy disks that were previously used to save GOLD databases. Begin on the Main Menu Screen.

1. Press the S key to access the Services Menu. Then press T to choose the Save to Compressed option.

Result: A window is displayed prompting you to enter the path and ID of the database to be saved. The path of the database currently highlighted in the database window is displayed as the default.

2. If you want to save one or more databases from this path, press the F8 key. If you want to save databases from a different path, first type in the new path, then press the F8 key.

Result: A window is displayed listing all the databases in the specified path.

3. Highlight any database(s) that you want to save and press the Space Bar to mark them with a check mark.
4. Press the Enter key.

Result: A window is displayed prompting you to specify the path where the compressed data files should be saved. The default is the root directory on the A (floppy disk) drive.

5. Press Enter to accept the default, or type the letter designating a different valid floppy drive and then press Enter.

Result: A window is displayed listing the databases previously stored on this series of floppy disks.

6. Highlight and then press the Space Bar to remove the check mark from any stored databases you do *not* want to keep (that is, any databases you want to delete from the compressed data file). Then press the Enter key.

Result: You are prompted to insert all floppy disks that were previously used with the current disk to save the databases.

7. Insert each disk in order, as you are prompted to do so.

Results:

- The program reads each saved file, then prompts you to insert the next disk.
- When all the disks have been read, the program prompts you to insert the first floppy disk for saving the databases.

8. Insert the first disk again. Insert additional disks as you are prompted to do so.

Notes:

You can save the databases to the same set of floppy disks or a different set. Be sure the floppy disks are formatted and numbered.

If the target diskettes contain previously saved files, you will receive the message: "Diskette is NOT blank, delete OLD Files and Save NEW Files? (Y/N)N". You must answer Yes to proceed.

Results:

- A series of messages is displayed as each database file is compressed and saved.
- When all of the data has been saved, the program returns to the Main Menu Screen and issues a message that the Save to Compressed process is complete.

24.5 Load From Compressed

Purpose

This option is used to expand and reload one or more databases previously saved to a compressed data file. The compressed databases are expanded using the PKUnzip(R) utility.

Procedure

Use these instructions to load one or more databases previously saved in a compressed data file. Begin on the Main Menu Screen.

1. If you are loading from floppy disk, insert the floppy disk (or first floppy disk in the series) into the floppy drive.
2. Press the S key to access the Services Menu. Then press F to choose the Load From Compressed option.

Result: A window is displayed prompting you to enter the path where the compressed databases are stored. The default is the root directory of floppy drive A.

3. Enter the drive and directory or press Enter to accept the default.

Result: A window is displayed listing all the databases previously saved to this path.

4. Use the Arrow keys to move up and down the list. Press the Space Bar to mark with a check mark any databases that you want to load.
5. When the list has checks on all the databases you want to load, press the Enter key.

Result: A window is displayed listing the drive and directory of the database that was highlighted in the database window.

6. If this is the path where you want to load the database(s), press Enter.

If you need to designate a different path, type over the current designation with the new path. Then press Enter.

Results:

- The program expands the selected databases and places them on the drive and in the directory you have chosen.

Note: If a database with the same ID as one you are loading already exists in the specified path, GOLD prompts you to determine whether the existing database should be overwritten. Enter Y to overwrite or N to keep the existing database.

- You are prompted to determine whether or not you want the newly loaded databases to be selected in the database window.

7. Enter Y to confirm selecting the databases or N to deny.

Result: The databases are selected or not, depending on your choice. The Main Menu Screen is then redisplayed.

24.6 Reset Database Index

Purpose

This option is used to delete the indexes for one or more databases.

A *database index* is a file that GOLD uses as a set of pointers to find information in the associated database. If an index does not exist, GOLD automatically creates one when it opens a database.

When to Use

Occasionally there are circumstances, such as power outages, that can corrupt database indexes. This can render a database useless.

If GOLD cannot access a database when it looks in the proper directory, use the Reset Database Index option to delete the indexes for that database. This allows GOLD to recreate the indexes and then access the database.

This option can also be used to remove database indexes to save space on your hard disk. The databases will still be usable, since GOLD will reindex the first time the databases are selected.

Procedure

This procedure explains how to reset the index for one or more databases. Begin on the Main Menu Screen.

1. Press the S key to access the Services Menu.
2. Press I to choose the Reset Database Index option.

Result: A window is displayed listing the path and ID of the database that was highlighted when you accessed the menu.

3. If this is the database you need to reset the indexes for, press Enter.

If you need to select a different database, type its ID. (Change the drive and directory if necessary.) Then press Enter.

If you need to select multiple databases, refer to Section 24.1 for instructions.

Result: The index or indexes are reset and the program returns to the Main Menu Screen.

24.7 Pack a Database

Purpose

The Pack a Database option is used to remove any deleted items or titles from a database. It also resets the index files for the database. This option works on only one database at a time.

When to Use

As previously explained, when you delete items or titles from a database, the items are flagged for deletion, but their records remain stored in the database.

Use the Pack a Database option when you want to actually remove deleted items or titles permanently from the database.

Caution

In a multi-user network environment, no users may access a database while it is being packed. If you attempt to pack a database that another user is currently accessing, the process will be cancelled.

Procedure

Follow these steps to pack a database, starting on the Main Menu Screen.

1. Press the S key to access the Services Menu.
2. Press K to choose the Pack a Database option.

Result: A window is displayed listing the path and ID of the database that was highlighted when you accessed the menu.

3. If this is the database you need to pack, press Enter.

If you need to select a different database, type its ID. (Change the drive and directory if necessary.) Then press Enter.

Result: You are prompted to confirm packing the database.

4. Enter Y to confirm or N to cancel.
5. If GOLD detects any memo data that can be packed, you will be asked "Do you wish to PACK the memo data also? (Y/N) N". Answer yes, unless you have a very large database and don't want to take the time to pack the memo data right now. This new feature helps to reduce the size of your databases.

Result: If you entered Y, the database (and possibly the memo data) is packed. In either case, the program returns to the Main Menu Screen.

24.8 Erase a Database

Purpose

The Erase a Database option is used to remove one or more databases permanently from disk.

Caution

Use this option only when you are certain you no longer have need for the selected database(s).

Procedure

Follow these steps to erase a database, starting on the Main Menu Screen.

1. Press the S key to access the Services Menu.
2. Press E to choose the Erase a Database option.
Result: A window is displayed listing the path (but not the ID) of the database that was highlighted when you accessed the menu.
3. Change the drive and directory if necessary. Then press the F8 key to view a list of databases in the current directory.
4. Use the Arrow keys to move through the list. Select any databases you need to erase by pressing the Space Bar.

Result: A check mark appears next to any database you select.

5. When all the databases to be erased are selected, press the Enter key.

Result: You are prompted to confirm erasing each database that you marked.

6. Enter Y to erase each database, or N to cancel.

Result: When the last erasure has been confirmed or canceled, the Main Menu Screen is redisplayed.

CHAPTER 25

SYSTEM ADMINISTRATION

Purpose

The Admin (Administrative) Menu is used to maintain permission settings, which GOLD checks in order to allow or deny users access to program functions. This menu is also used to define or change data used for profit and bond computations and for printing.

System Administrator

The *System Administrator* is the designated person responsible for maintaining GOLD user settings at your site. These settings determine whether a user can change the different databases, the structure of projects, and the format of reports.

In a multi-user LAN environment, the System Administrator is also usually responsible for maintaining program directories and backing up data files.

Restricting Use of the Menu

In order to access the Admin Menu, you must have the file CG_ADMIN.EXE in your startup directory. To restrict the use of the Admin Menu in a LAN environment, the System Administrator need only prevent users from copying CG_ADMIN.EXE onto their startup directories.

To restrict use in an environment with stand-alone computers, a System Administrator can delete the CG_ADMIN.EXE file from the GOLD Directory on individual computers after installing the software.

Refer to Chapter 2 for more information on installation procedures and LANs.

Accessing the Menu

System Administrators or other authorized users access the Admin Menu from the Main Menu Screen by pressing the A key. The menu is illustrated in Figure 25.1.

Refer to Section 3.8 for general information about the database menus.

Figure 25.1: The Admin Menu

Chapter Overview

This chapter describes the purpose and use of the following options on the Admin Menu:

- Edit Permission Settings
- Edit Bond and Profit Tables
- Edit Printer Settings Table

Note: The fourth option, Edit Digitizer Setup Table, is part of the optional Digitizer Module and is described in *Volume 2, Advanced Options*.

25.1 Edit Permission Settings

Purpose

This option is used to define or change a user's permission settings. These settings determine which program functions the user can access. They also specify application programs that can be used in conjunction with GOLD.

The permission settings are stored in a file in the user's startup directory called the COMPOSER.INI file.

When to Use

The System Administrator uses this option to access a user's COMPOSER.INI file and make modifications to the user's settings.

Adding a New User

The System Administrator can also use this option to create a COMPOSER.INI file for a new user.

First, load the settings of a user with similar access permissions, or use the Administrator's settings as a default. Next, change the settings as needed to reflect the new user's access permissions. Then, save the settings to the user's startup directory (in a LAN), or store them on floppy disk and transfer them to the user's computer. Refer to the Procedure below for detailed instructions.

User Settings Screen

Once you load a user's settings, the User Settings Screen is displayed (Figure 25.2).

FUNCTION	USER SETTINGS for C:\MCACES\COMPOSER.INI	
1 HELP	DATABASE EDIT-ACCESS	Models Database : Yes
2 ADD		Assemblies Database : Yes
3 TITLES		Unit Prices Database : Yes
4 EDIT		Crews Database : Yes
5 DETAIL		Labor Rates Database : Yes
6 LOOKUP		Equipment Rates Database : Yes
7 NOTES	PROJECT PERMISSIONS	Project Structure Access : Yes
8 SELECT		Allow Cost Overrides : Yes
9 MENU		Allow Report Format Edit : Yes
10 EXIT	AUXILIARY PROGRAMS	
	User's File Viewer :	C:\GOLD530\CG_VIEWR.COM
	Communications :	
	DIGITIZER SELECTION :	1-None

Models Database Edit-Access PROJECT v5.30

Figure 25.2: User Settings Screen

Procedure

Follow these steps to edit permission settings.

1. From the Main Menu Screen, press the A key to access the Admin Menu. With the highlight on the Edit Permission Settings option, press Enter.

Result: A window is displayed prompting you to enter the path of the COMPOSER.INI file to be loaded.

2. Type in the path specification and press Enter.

Note: If you want to use the current (Administrator's) COMPOSER.INI file, simply press Enter to accept the default.

Result: The User (or Administrator) Settings Screen is displayed.

3. Make any necessary changes to the settings. Refer to the Field Descriptions below for information.

When you have filled in the fields as needed, press the F10 key to save the changes and exit.

Result: A window is displayed prompting you to enter the path where the COMPOSER.INI file should be saved.

4. Type in the path specification and press Enter.

Result: The user settings are saved to the COMPOSER.INI file in the specified directory. GOLD displays another prompt, asking if you want to store the same settings in another directory.

5. If you do not want to store the same settings for another user, press the Enter key to accept the default No and return to the Main Menu Screen.

If you do want to store the same settings for another user, type Y.

Result: You are prompted for the next drive and directory where the settings should be stored.

Fill in the path specification and press Enter.

Note: Repeat this step for each directory where you want these settings stored.

Field Descriptions

Following are the fields on the User Settings Screen.

Database Edit-Access Fields

Enter Y in each field to allow the user to add, edit, or delete data in databases of the indicated type.

Project Permission Fields

Field	Description
Project Structure Access	Enter Y to allow the user to change the title structure of projects.
Allow Cost Overrides	Enter Y to allow the user to specify cost overrides at title levels in the project.
Allow Report Format Edit	Enter Y to permit the user to make changes to report formats.

Auxiliary Setup Fields

Field	Description
User's File Viewer	<p>The DOS path and executable file name of a file viewer, editor, or word processing program to be used to view text files.</p> <p>This field must be filled in if the user is to have access to the View Reports Using Viewer option on the Reports Menu.</p> <p>The default is CG_VIEWR.COM, which is the file viewer supplied with GOLD.</p>
Communications	<p>The DOS path and executable file name of a communications program used to communicate by modem with other computers.</p> <p>This field must be filled in if the Run Communications option on the DOS Menu is to be available.</p>
Digitizer	<p>The type of Digitizer connected to this user's computer. This field is used only with the optional Digitizer Module. See Chapter 6 in Volume 2 for details.</p>

25.2 Edit Bond and Profit Tables

Purpose

This option is used to maintain bond percentages and profit weighting factors that can be applied to contractors' costs.

The figures entered through this option are referenced by the secondary entry screen for contractors. Refer to Section 7.4 for information about that screen and how this data is used.

This option is placed under the Admin Menu so that the System Administrator can keep these figures standard for all estimators at a site.

Bond and Profit Tables Screen

Choosing this option displays the Profit and Bond Tables Screen, as shown in Figure 25.3.

BOND AND PROFIT TABLES					
FUNCTION	BOND COMPUTATION				
1 HELP	Range	Cls B	Cls A	Cls A-1	
2 ADD	0 to :	100,000	2.500%	1.500%	0.940%
3 TITLES	100,000 to :	500,000	1.500%	1.000%	0.720%
4 EDIT	500,000 to :	2,500,000	1.000%	0.700%	0.600%
5 DETAIL	2,500,000 to :	5,000,000	0.750%	0.550%	0.500%
6 LOOKUP	5,000,000 to :	7,500,000	0.700%	0.500%	0.450%
7 NOTES	7,500,000 to :	Maximum	0.650%	0.450%	0.400%
8 SELECT	Additional per month over 12 : 1.000%				
9 MENU	PROFIT WEIGHTING FACTORS				
10 EXIT		Risk	20%		
		Diff	15%		
		Size	15%		
		Period	15%		
		Invest	5%		
		Assist	5%		
		Subcon	25%		
Bond Computation Range					
				EST A PROJECT	v5.29

Figure 25.3: Bond and Profit Tables Screen

Completing the Screen

Enter changes as needed in the fields on the screen. Refer to the Field Descriptions below.

When you have finished editing, press the F10 key to exit and save the data.

Field Descriptions

Bond Computation Fields

These fields are used to enter bond percentages to be applied to projects whose total cost falls within the defined ranges.

Field	Description
Range	Range of total project costs for which the corresponding bond percentages apply. Enter the upper limit for each range. GOLD automatically adjusts the lower limit for the next range.
Bond Class	For Bond Classes B, A, and A-1, enter the appropriate bond percentage for each range.
Additional per month over 12	Percent of the total (12-month) bond premium to be added for each month of project duration over 12. Note: The project duration is entered in the Estimated Construction Time field on the Report Title Page Screen. See Section 23.5.

Profit Weighting Factors Fields

Enter the weight to apply to each factor used in figuring the contractor's profit. The total of all weights should equal 100.

Note: Press F7 to fill in notes concerning the circumstances dictating the number entered for each profit factor. These notes will appear on the Profit Weighted Guidelines report. See section 23.19.

25.3 Edit Printer Setup Table

Purpose

The System Administrator selects this option in order to define or modify information about printers to be used by GOLD to print reports. Up to five printer setups can be specified for use by the software.

About Setup Information

The setup information you specify through this option is in the form of printer control codes. These codes provide page and character formatting instructions to the printer.

GOLD reports are formatted for 127 columns per line. Therefore, if you are printing on 8-1/2 inch paper, you will generally need to specify control codes for condensed or compressed mode. Another option may be to print in landscape mode. Refer to your printer documentation for more information and for the control codes to use.

Different Setups for the Same Printer

You may be able to use different printer setups to produce different results on the same printer. For example, your printer might allow you to print reports in both condensed-character portrait mode and in landscape mode.

If this is the case, you can define the two different setups as different choices on the Printer Setup Table Screen. Users can then select which setup they want to use when they print reports from the Run Reports Window (see Section 23.7).

Edit Printer Setup Table Screen

Choosing this option displays the Edit Printer Setup Table Screen, as shown in Figure 25.4.

Figure 25.4: Edit Printer Setup Table Screen

Completing the Screen

Enter data as needed in the fields on the screen. Refer to the Field Descriptions below.

When you have finished editing, press the F10 key to exit and save the data.

Field Descriptions

The fields on the Printer Setup Table Screen are repeated for each of the five printer setups (Choices A - E) that you can define.

Field	Description
Choice	<p>Name of the printer. May also include the setup mode, if more than one setup is used for the same printer.</p> <p>Examples: Laser Portrait 8-Pt. Laser Landscape</p>
Lines	<p>Number of lines per page to be printed. Most printers expect 66 lines per page in portrait mode and 50 to 55 lines per page in landscape mode.</p>
Width	<p>The maximum number of characters allowed on any line. Valid range is 127 - 256.</p>
Setup	<p>Control codes to be used for printing the reports. Enter the decimal equivalent of ASCII control codes, separated by a back slash. (The back slash instructs the software to translate the following 3 digits into a control character.)</p> <p>Example: \027\015</p> <p>Refer to your printer documentation for more information.</p>

THE DOS MENU

The DOS Menu is used to end the GOLD session or to exit temporarily to DOS functions.

You access the DOS Menu from the Main Menu Screen, by pressing the D key. If you are leaving GOLD, you can also go directly to the Quit option on the menu by pressing the F10 key. This displays the menu with the highlight already on the Quit option. Figure 26.1 is an illustration of the DOS menu.

FUNCTION	PREPARE	REPORTS	SERVICES	ADMIN	UTILITIES	MCACES	DOS
1 HELP							Create a DOS Shell Run Communications Quit GOLD
2 ADD							
3 TITLES							
4 EDIT							
5 DETAIL							
6 LOOKUP	DATABASE	DIRECTORY	ID	NAME	MCACES GOLD		
7 NOTES	Project	C:\GOLD\PR...	MILEXM	Storage Building			
8 SELECT	Models	C:\GOLD\DATA	TRACES	TRACES Work Breakdown Structure			
	Assemblies	C:\GOLD\DATA	ASM92A	17-Building Assemblies Library			
	Unit Prices	C:\GOLD\DATA	NAT92A	1992 National Unit Price Book			
	Crews	C:\GOLD\DATA	NAT94A	1994 National Crews Database			
	Labor Rates	C:\GOLD\DATA	NAT94A	1994 National Labor Rates			
	Equip Rates	C:\GOLD\DATA	NAT94A	1994 National Equipment Database			
9 MENU							
10 EXIT							
Exit temporarily to DOS							
				EST A PROJECT	v5.29		

Chapter Overview

The DOS Menu

26.1 Create a DOS Shell

Purpose

This option allows you to temporarily exit from GOLD and access the DOS prompt.

From the DOS prompt, you can execute DOS commands. If your system has sufficient memory, you can also execute other programs without ending your GOLD session.

Procedure

1. From the Main Menu Screen, press the D key to access the DOS Menu.
2. Press D to initiate the DOS Shell option.

Result: The DOS system prompt is displayed.

3. When you are ready to return to GOLD, type EXIT at the DOS prompt and press the Enter key.

Note: If you have changed directories, be sure to return to the GOLD directory before typing EXIT.

Result: You are returned to the GOLD Main Menu Screen.

26.2 Run Communications

Purpose

This option suspends GOLD and executes a communications program. The communications program is defined by the System Administrator in the Communications field on the User Settings Screen. When the communication program is terminated, you are returned to the GOLD Main Menu Screen.

Procedure

1. From the Main Menu Screen, press the D key to access the DOS Menu.
2. Press T to access the Run Communications option.

Result: The defined communications program is executed. Its first screen is displayed.

3. Use the communications program as needed. When you are ready to return to GOLD, exit the communications program.

Result: You are returned to the GOLD Main Menu Screen.

26.3 Quit GOLD

Purpose

This option exits GOLD and displays the DOS prompt. All files are properly closed and current program settings are written to the COMPOSER.INI file.

Importance

It is important to use this option when you are ready to end your GOLD session. Failure to do so can result in start-up problems or file errors.

Procedure

Use this procedure to properly end a GOLD session.

1. From the Main Menu Screen, press the F10 key.

Result: The DOS Menu is displayed with the highlight on the Quit GOLD option.

2. Press Enter.

Result: The program is terminated in normal fashion and the DOS prompt is displayed.

APPENDIX A

LEARNING GOLD

Introduction

Appendix A contains a tutorial that takes you step-by-step through the process of building a sample estimate. This estimate is based on the CIVTMP project template, which is included on the GOLD diskettes.

Only a few of the titles and items needed for an actual estimate will be included in the sample project that you build. However, by following the lessons presented here, you will learn all the procedures you need for building real estimates of your own.

Each lesson builds on the preceding lesson, so you should complete them in sequence. For your convenience, the starting point of each lesson is noted. References to the relevant sections of this user manual are also provided.

Use of Supporting Databases

This tutorial includes use of the supporting databases currently packaged with the GOLD software. The Names, IDs, and contents of your databases may vary slightly from what is indicated here. In particular, the costs shown in Lesson 6 may be different.

Before You Begin

Before beginning the lessons, you should read Chapter 3 so that you understand the basic concepts of GOLD and how to use the software.

Lesson 1: Starting the Project

Objectives

After successfully completing Lesson 1, you will be able to:

- Verify that the supporting databases are properly selected.
- Select and load supporting databases if necessary.
- Load a Project Database template.
- Create a new project based on a template.

References

Refer to the following sections of this manual for more information on the topics presented here:

Task 1 - 3.1 The Main Menu Screen

Task 2 - 24.2 Select a Database

Task 3 - 8.1 Selecting a Project Database

Task 4 - 5.1 Creating the Project Database

Starting Point

Begin Lesson 1 from the GOLD Main Menu Screen.

Note: This lesson assumes that you have the supporting databases loaded in a subdirectory called DATA located under your GOLD530 directory.

Task 1: Check the Supporting Databases

Examine the database window. The following supporting databases, packaged with the GOLD software, should be displayed:

- Unit Price - NAT92A National FY92 Unit Price Book
- Crews - NAT94A 1994 National Crews Database
- Labor Rates - NAT94A 1994 National Labor Rates
- Equip Rates - NAT93A 1993 National Equipment Rates

Note: The exact IDs and Names of the databases may vary slightly.

If (Not Located) is displayed in the Description column for any of these databases, perform Task 2. Otherwise, proceed to Task 3.

Task 2: Load the Supporting Databases

1. Move the highlight to the row of a Not Located database.
2. Press the F8 key.

Result: A window is displayed listing the available database or databases of the selected type on the current path.

3. If more than one database is shown, use the Arrow keys to move the highlight to the proper one, then press Enter.

Result: The selected database is loaded and highlighted in the database window.

4. Repeat Steps 1 to 3 for each database type that is Not Located.

Task 3: Load the CIVTMP Project Template

1. Use the arrow keys to move the highlight to the Project Database line.
2. Press the F8 key.

Result: A window is displayed listing the available Project Databases on the current path.

3. Move the highlight to the CIVTMP database and press Enter.

Result: The CIVTMP database template is loaded and highlighted in the database window.

Task 4: Create a New Project

1. With the highlight on the CIVTMP template, press the F2 key.

Result: The Project Database Edit Screen is displayed (Figure A.1).

2. Type **LESSON** in the Project ID field to identify the new project database. Then press Enter.

Note: Throughout this tutorial, data you enter on the screen is displayed in boldface type, as above.

3. Type **Learning GOLD** in the Project Name field and press Enter.

Figure A.1: Project Database Edit Screen

4. Leaving the remaining fields on the screen as they are, press the F10 key.

Result: GOLD displays a series of messages as it creates the new project. The LESSON Project Database is then displayed and highlighted in the database window.

Lesson 2: Modifying Project Characteristics

Background

In Lesson 1, you created the new LESSON Project Database. This database inherited the project columns and breakdown structure characteristics of the CIVTMP project template, on which it was based.

In Lesson 2, you will examine these characteristics and make a minor modification.

Objectives

After successfully completing Lesson 2, you will be able to:

- Examine the Name Project Columns Screen for a project and alter the column information if needed.
- Examine the Set Breakdown Structure Screen and change the project breakdown structure if needed.

Reference

Refer to Sections 5.2 through 5.5 of this manual for more information on the topics presented here.

Starting Point

Begin Lesson 2 from the GOLD Main Menu Screen, with the highlight on the LESSON Project Database.

Task 1: Examine the Name Project Columns Screen

1. Press P to access the Prepare Menu.
2. Press N to select the Name Database Columns option.

Result: The Name Project Columns Screen is displayed, with column information for the LESSON Project (Figure A.2).

3. Examine the fields on the screen. These fields define the cost columns used in the project for Direct, Indirect, and Owner Costs. The definition of these columns was copied from the CIVTMP project template.

Note: If you wanted to change any of the information in these fields, you could do so by moving the cursor to the field and typing the new data.

4. After examining the screen, press F10 to return to the Main Menu Screen.

Figure A.2: Name Project Columns Screen

Task 2: Modify the Set Breakdown Structure Screen

1. From the Main Menu Screen, Press P to access the Prepare Menu.
2. Press B to select the Set Breakdown Structure option.

Result: The Set Breakdown Structure Screen is displayed, with information for the LESSON Project (Figure A.3).

3. Examine the fields on the screen. These fields define the title levels in the project and the length of the ID used to identify each level. Again, this information was copied from the CIVTMP project template.

Figure A.3: Set Breakdown Structure Screen

4. Change the length of the Level 1 ID from 2 to 4, by typing 4 in the Length field on the Level 1 row. Then press Enter.

This change means that four characters can now be used to identify Level 1 titles.

5. Press F10 to exit the screen and save the change.

Result: The Main Menu Screen is redisplayed.

Lesson 3: Adding Titles

Background

In Lessons 1 and 2, you created the new LESSON Project Database, examined its inherited characteristics and made a minor modification to its title structure. The project is still basically a shell, as no actual data has yet been added.

In Lesson 3, you will begin building the project by adding titles to the database.

Objectives

After successfully completing Lesson 3, you will be able to:

- Access a Project Database from the Main Menu Screen.
- Add titles at different levels in the project.

Reference

See Section 6.1 of this manual for more information on adding project titles.

Starting Point

Begin Lesson 3 from the GOLD Main Menu Screen, with the highlight on the LESSON Project Database.

Procedure

1. Press Enter to access the LESSON Project Database.

Result: The database is loaded and the Level 1 title list screen is displayed. This screen contains one title, the Project Information Record, which is automatically created with the project.

2. Press the F2 key to add to the list of titles.

Result: A title entry screen is displayed (Figure A.4). The screen includes default data displayed in brown or low-intensity. The ID, Name, and Quantity fields on the screen are labeled "Contract," which is the Level Title defined on the Set Breakdown Structure Screen.

Figure A.4: Title Entry Screen, LESSON Project

3. To define a new title, do the following:

- Type **0001** in the ID field and press Enter.
- Type **Major Highway Work** in the Name field and press Enter.
- Press the F10 key to exit and save.

Result: The Level 1 title list screen is displayed with the new title, Major Highway Work, highlighted.

4. To begin adding titles below the new title, press Shift+F3 (Add Subtitle).

Result: A Level 2 title entry screen is displayed. The Level 1 title, Major Highway Work, is shown at the top of the screen. The Level Title for Level 2, "Feature," is used to label the ID, Name, and Quantity fields.

5. To define the first Level 2 title, do the following:

- Type **04** in the ID field and press Enter.
- Type **Lands and Damages** in the Name field and press Enter.
- Press the Page Down key to save.

Result: The title is saved and a new title entry screen is displayed, showing default data from the previous screen. You can use this screen to add another title at the same level.

6. Define a second Level 2 title as follows:

- Type **08** in the ID field and press Enter.

- Type **Roads, Railroads, and Bridges** in the Name field and press Enter.
- Press the F10 key to exit and save.

Result: The Level 2 titles list screen is displayed with the two new titles shown.

7. With the highlight on title 08 Roads, Railroads, and Bridges, press Shift+F3 (Add Subtitle)

Result: A Level 3 title entry screen is displayed. The Level 2 title is shown at the top of the screen. The Level Title for Level 3, "Subfeat" (Subfeature), is used to label the ID, Name, and Quantity fields.

8. Define the Level 3 title:

- Type **01** in the ID field and press Enter.
- Type **Roadway Paving** in the Name field and press Enter.
- Press F10.

Result: The title is saved and the Level 3 titles list screen is displayed, as shown in Figure A.5.

Figure A.5: Completed Title List Screen, LESSON Project

Lesson 4: Adding Cost Items Through Lookup

Background

In Lesson 3, you added the following hierarchy of titles to the LESSON Project Database:

Level 1: 0001 - Major Highway Work

Level 2: 0001/04 - Lands and Damages

Level 2: 0002/08 - Roads, Railroads, and Bridges

Level 3: 0001/08.01 - Roadway Paving

In Lesson 4, you will continue building the project by adding cost items beneath the Level 3 title.

Objectives

On successful completion of Lesson 4, you will know how to:

- Access the cost item entry screen.
- Use the Lookup feature to search the Unit Price Database.
- Mark items in the Unit Price Database for retrieval, using either of two methods.
- Retrieve items from the Unit Price Database and place them in the project.

Reference

See Sections 6.2 and 6.3 for more information on the topics presented in this lesson.

Starting Point

Begin Lesson 4 at the Level 3 title list screen, with the highlight on the Roadway Paving title.

Task 1: Retrieving a Single Cost Item

1. Press Shift+F5 (Add Detail).

Result: A detail item entry screen is displayed (Figure A.6). The screen includes default data displayed in brown or low-intensity. The title immediately above this cost item is shown at the top of the screen.

Figure A.6: Detail Item Entry Screen, LESSON Project

2. Press the F6 key.

Result: The Lookup Menu is displayed, with the highlight on the Unit Price Database.

3. Press Enter to accept the choice of the Unit Price Database.

Result: The Lookup feature is activated. The Unit Price Database is accessed and its Level 1 title list screen is displayed (Figure A.7).

4. Search through the database by using the Arrow keys to move the highlight to a specific title, then the Enter key to select that title.

- From the Level 1 screen, select 02 Sitework.
- From the Level 2 screen, select 02600 Paving and Surfacing.
- From Level 3 select 02611 Crushed Stone Paving.
- From Level 4 select 02611 1000 Prepare and Roll Subbase.

Result: The detail-level list screen is displayed (Figure A.8).

Figure A.7: Level 1 Title List Screen, Unit Price Database

Figure A.8: Detail-Level List Screen, Unit Price Database

5. Move the highlight to item MIL 02611 1002 - Crushed Stone Paving Large Area.
6. Press F6.

Result: The Lookup Menu is displayed with the highlight and a check mark on the Unit Prices option.

7. Press Enter.

Result: The program returns to the Project Database. The cost item entry screen is displayed with the data for the retrieved item filled in.

8. To enter a Quantity for the cost item, press the Tab key until the cursor is in the Quantity field. Type **75500** and press Enter.

Result: The Quantity is recorded and the cursor moves to the (unlabeled) Unit of Measure field.

9. Leaving SY (square yards) in the Unit of Measure field, press the F10 key to exit and save.

Result: The cost item is added to the project. The detail-level list screen is displayed with the new cost item shown.

Task 2: Retrieving Multiple Cost Items

In this exercise, you will look up and add multiple cost items beneath the same project title. Begin at the detail-level list screen with the MIL 02611-1002 item highlighted.

1. Press F2.

Result: The cost item entry screen is displayed, with data from the highlighted cost item filled in.

2. Press the F6 key.

Result: The Lookup Menu is displayed, with the highlight on the Unit Prices option.

3. Press Enter to accept the choice of the Unit Price Database option.

Result: The Lookup feature is activated and the Unit Price Database is accessed. Since a database ID was filled in on the cost item entry screen, GOLD finds that item in the Unit Price Database. Therefore, the detail-level list screen is displayed (Figure A.8).

4. Use the Down Arrow key to move the highlight to item MIL 02611 2114 - 12" (30 cm) Crushed Agg Base Crs.

Now press the Tab key to move to the Quantity field for this item.

Type a Quantity of **75500** in this field and press Enter.

Result: The figure you typed is entered in the Quantity field and a check mark is placed beside the cost item. Entering a Quantity value is an alternate method of marking an item for retrieval.

Press the Home key to return to the leftmost column of the screen. Notice the check mark on the selected item.

5. Use the instructions in Step 4 to mark the following additional cost items:
 - MIL 02615 1002 - 8" (20 cm) RC Concrete Pavement. Quantity = 16870 SY
 - MIL 02617 1001 - Pavement Sealing, Roads. Quantity = **1900** (LF).

Result: All three items are now marked for retrieval.

6. To view a list of the items you have marked, press Alt+F9. (This is the same as choosing the View Marks function from the Mark Menu.)

Result: A window is displayed listing the marked items.

Press Esc to dismiss the window.

7. To retrieve the items to the Project Database, press F6.

Result: The Lookup Menu is displayed with the highlight and a check mark on the Unit Price Database.

Press Enter.

Result: The program returns to the Project Database. The cost item entry screen is displayed with the data from the last retrieved item filled in. Note that the Quantity you entered in the Unit Price Database has also been brought into the estimate.

8. Press the F10 key to exit and save.

Result: The detail-level list screen is displayed, with all four cost items now listed (Figure A.9).

Figure A.9: Detail-Level List Screen, LESSON Project

Lesson 5: Adding a User-Defined Cost Item

Background

In Lesson 4, you used Lookup to retrieve several cost items from the Unit Price Database and add them to the project under the Roadway Paving title. You saw how the Lookup feature can be used to quickly and efficiently copy cost data from a supporting database into the project.

However, there will likely be times when you need to add a cost item that is specific to your estimate and not stored in a supporting database. In Lesson 5, you will learn how to define a cost item and add it to the Project Database.

Objectives

Lesson 5 will show you how to:

- Enter the data necessary to define a cost item in the Project Database.
- Access the secondary cost item entry screen and remove a default crew reference from the cost item definition.

Reference

Refer to Section 6.2 for more information on defining cost items in the Project Database.

Starting Point

Begin this lesson at the detail-level list screen where you finished Lesson 4 (Figure A.9). Four cost items should be displayed on the screen.

Procedure

1. With the highlight on the last cost item, (MIL 02617 1001), press F2.
Result: A cost item entry screen is displayed, showing data from the previously highlighted item.
2. Press the Tab key twice to move the cursor to the Database ID field. Press the Space Bar and then Enter to make the first part of the field blank. Press the Space bar and Enter again to blank the second part of the field.
Result: The cursor moves to the Description field.
3. Type **Misc. Pavement Striping** in the Description field and press Enter.
Result: The cursor moves to the Quantity field.
4. Type **1** in the Quantity field and press Enter.
Result: The cursor moves to the (unlabeled) Unit of Measure field.

Type **LS** (for Lump Sum) in the Unit of Measure field and press Enter.

5. The item you are currently defining has data copied from the previously highlighted item. This data includes a crew reference for pricing of labor and equipment.

Since you do not want this user-created item to be repriced based on a crew, you must remove the crew reference. Do the following:

- Press Shift+F7 to access the secondary entry screen.
- Press the Tab key to move to the ID field.
- Press the Space bar, then Enter, to place a blank in the ID field.
- Press F10 to save the change and return to the primary entry screen.

Result: GOLD issues a prompt informing you that you must select a valid crew to link pricing. Since you do not want to use a crew for this item, simply press Enter to dismiss the message.

6. You can now add unit costs to the item independently of any crew reference. Do the following:

- Press the Tab key until the cursor is positioned in the Other cost field.
- Type a cost of **1800** and press Enter.

Note: Leave zeros in the other cost fields.

7. To add a Note to the item, do the following.

- Press F7.

Result: A Note edit window containing the item description is displayed.

- Press the Down Arrow key to move the cursor to the second line. Type the following text: **Quote provided by ABC Striping Company.**
- Press F7 again to exit and save the Note.

Result: The entry screen is redisplayed. Notice that NOTES is now shown on the status line at the bottom of the screen, indicating that a Note exists for this item.

8. Press F10 to exit the entry screen and save the item.

Result: The cost item is added to the project. The detail-level list screen is displayed with the new cost item shown and highlighted.

Lesson 6: Examining a Cost Item

Background

In the previous two lessons, you added detail cost items to the LESSON Project Database. During the process of building an estimate, there are often times when you need to examine cost items, and sometimes change price information.

Lesson 6 shows you how to use the Lookup feature to examine price information for cost items brought in from supporting databases.

Objectives

After successfully completing Lesson 6, you will know how to:

- Access cost item entry screens in edit mode.
- Look up into a supporting database to examine cost information.
- Analyze how costs are computed based on data in the supporting databases.

Reference

Refer to Sections 6.3 and 6.5 of this manual for more information on the topics covered here.

Starting Point

Begin this lesson at the detail-level list screen where you finished Lesson 5. Five cost items should now be displayed on the screen.

Procedure

1. Move the highlight to item 02615 1002, then Press F4.

Result: The entry screen for the selected item is displayed in edit mode (Figure A.10).

Figure A.10: Detail Item Entry Screen in Edit Mode, LESSON Project

2. Press Shift+F7 to display the secondary entry screen (Figure A.11). Notice the Crew ID, COKCD. This crew is referenced for labor and equipment price information by this cost item.

Figure A.11: Secondary Detail Item Entry Screen, LESSON Project

3. To understand how the item's cost data is calculated, examine the composition of the crew by looking it up in the Crews Database.

Press Ctrl+F8.

Note: This is the speed key combination for looking up into the Crews Database.

Result: The Crews Database is accessed. The detail-level list screen for the COKCD crew is displayed (Figure A.12). The items listed are the individual members of this crew:

- 1 asphalt finishing machine
- 3 laborers
- 1 foreman
- 2 equipment operators
- 0.83 small tools allowance
- 1 roller

Figure A.12: Detail-Level List Screen, Crews Database

4. With the highlight on the first crew member, press F4.

Result: The entry screen for this member is displayed in edit mode.

5. Notice that the unit equipment rate (crew member rate) for the item is \$41.55. This rate is multiplied by the member quantity (in this case 1) to yield the total cost to the crew for this member.

6. Press the Page Down key.

Result: The entry screen for the next crew member is displayed.

7. Notice that the unit labor rate for this item is \$12.859. This rate is multiplied by the member quantity (in this case 3, for the three laborers) to yield the total hourly cost to the crew for this member: \$38.577.
8. Continue to press the Page Down key and examine the rates for each crew member in turn.

If you add the figures for each screen, you can see how the crew costs are determined:

$\$41.55 + \$1.12 \text{ (small tools)} + \$13.17 \text{ (roller)} = \$55.84 \text{ (total hourly equipment cost)}$

$\$38.57 + \$13.36 \text{ (foreman)} + \$34.31 \text{ (operators)} = \$86.24 \text{ (total hourly labor cost)}$.

$\$55.84 + \$86.24 = \$142.08 \text{ (total hourly cost)}$.

9. You can see these costs listed on the crew title entry screen, by doing the following.

After viewing the last entry screen, press Page Down again.

Result: The detail-level list screen is redisplayed.

Press F3 to access the title list screen for the crew. Then press F4 to see the crew title entry screen (Figure A.13).

10. To return to the Project Database without retrieving any data, press Shift+F10.

Result: The program returns to the Project Database. The secondary entry screen for the cost item is displayed. Notice the hourly output figure of 525 SY/HR. This figure was copied in from the Unit Price Database.

Figure A.13: Crew Entry Screen

11. Press F10 to return to the primary entry screen.

The crew labor and equipment hourly costs, divided by the hourly output defined for the item, are reflected in the Labor and Equipment unit cost fields as follows:

$\$86.24 \text{ (hourly labor cost)} / 525 \text{ SY per HR} = \$.1642666 \text{ per SY (rounded to .16 on the screen).}$

$\$55.84 \text{ (hourly equipment cost)} / 525 \text{ SY per HR} = \$.1063619 \text{ per SY (rounded to .11).}$

12. Finally, you can see how the unit labor and equipment costs for the item are multiplied by the item quantity to yield the extended labor and equipment costs:

$\$.1642666 \text{ per SY} \times 16870 \text{ SY} = \2772 (labor).

$\$.1063619 \text{ per SY} \times 16870 \text{ SY} = \$1794 \text{ (equipment).}$

13. After viewing the cost data, press F10 or Esc to return to the detail-level list screen.

Lesson 7: Applying Indirect Costs

Background

In the previous lessons, you have constructed the sample estimate by adding titles and cost items. So far, the estimate consists of Project Direct Costs only.

In Lesson 7, you will add Project Indirect Costs to the estimate.

Objectives

After successful completion of this lesson, you will be able to:

- Access the Contractor Entry Screen.
- Define a contractor record and add it to the Project Database.
- Apply Indirect Costs in the project.

Reference

Refer to Sections 7.2 through 7.5 for more information on defining and applying Indirect Costs.

Starting Point

Begin this lesson at the detail-level list screen where you finished Lesson 6.

Task 1: Defining the Contractor Record

Contractor records are always defined as titles below the Project Information Record. Follow these steps:

1. To display the Level 1 titles list screen, press Alt+F10 (Top of Database).
2. Move the highlight to the Project Information Record, then press Shift+F3 (Add Subtitle).

Result: A contractor entry screen is displayed, with default data in the fields (Figure A.14).

Figure A.14: Contractor Entry Screen, LESSON Project

3. Define the contractor as follows:
 - Type **01** in the Level ID field and press Enter.
 - Type **PV** in the Contractor ID field and press Enter.
 - Type **Paving Contractor** in the Contractor Name field and press Enter.
4. The Indirect Cost columns shown at the bottom of this screen are inherited from the CIVTMP template. The cost method (P) shown for each column is the default.

Enter cost markup percentages for the contractor as follows:

- Press the Tab key until the cursor is positioned in the Percentage field in the Field Overhead (Field OH) column.
- Type a value of **8** and press Enter.
- Press the Tab key to move to the Home Office Percentage field. Type a value of **2** and press Enter.
- Press the Tab key to move to the Profit Percentage field. Type a value of **5** and press Enter.
- Press the Tab key to move to the Bond Percentage field. Type a value of **1.2** and press Enter.

Result: These percentages will be applied to the Direct Costs of work performed by this contractor to figure the resulting Indirect Cost column values. Notice also that the total percentage has been computed by the program and placed in the Total column.

5. Press F10 to exit and save.

Result: The Level 2 title list screen is displayed with the new contractor record highlighted (Figure A.15).

6. Press Esc to return to the Level 1 title screen.

Figure A.15: Title List Screen With Contractor Record, LESSON Project

Task 2: Applying the Contractor's Costs

Once a contractor record has been defined, the contractor's markups (Project Indirect Costs) can be applied to either a title or cost item. In this exercise, you apply the markups to a Level 3 title.

1. Move through the database by using the Arrow keys to move the highlight to a specific title, then the Enter key to select that title.
 - From the Level 1 screen, select Major Highway Work.
 - From the Level 2 screen, select Roads, Railroads, and Bridges.

Result: The Level 3 screen is displayed, with the highlight on the Roadway Paving title.

2. Press F4 to display the title entry screen in edit mode.
3. Press the Tab key until the cursor is positioned in the Contractor field. Type **PV** in the field and press Enter.
4. Press F10 to exit and save the change.

Result: The Level 3 title list screen is displayed (Figure A.16). Notice that the contractor ID, PV, is now shown with the Roadway Paving title. This means that this contractor's costs have been applied to this title. The accumulated Direct Costs of this title will be used as the basis for the Indirect Cost markups defined on the contractor entry screen. The cost markups will be shown on reports that you print in Lesson 10.

5. Press Alt+F10 to return to the Level 1 title list screen.

Figure A.16: Title List Screen Showing Applied Contractor, Lesson Project

Lesson 8: Applying Owner Costs

Background

The LESSON Project now contains both Direct and Indirect Costs. In the following lesson, you will complete the building of the sample estimate by applying Owner Costs.

GOLD lets you apply Owner Costs at either the default Owner Cost Level or the lowest title level.

- The default Owner Cost Level is set on the Set Project Breakdown Screen. For the LESSON Project, this is defined as Level 0. This means that Owner Costs are applied at the Project Information Record and distributed over the whole project.
- The lowest title level is occupied by any title that has detail items, rather than subtitles, directly beneath it. In the LESSON Project, this level is represented by the Roadway Paving title.

In this lesson, you will apply Owner Costs to titles at both the default level and the lowest title level.

Objectives

After successful completion of this lesson, you will be able to:

- Access the secondary entry screen for project titles
- Use the fields on the secondary entry screen to apply Owner Costs to the title.

Reference

Refer to Section 7.6 in this manual for detailed information on Owner Costs.

Starting Point

Begin this lesson at the Level 1 title list screen.

Task 1: Applying at the Owner Cost Level

1. Use the Arrow keys to move the highlight to the Project Information Record. Then press F4.

Result: The title entry screen is displayed in edit mode.

2. Press Alt+W. This is the same as selecting Edit Owner from the Add/Edit Menu.

Result: The Owner Cost Screen (Figure A.17) is displayed. This screen shows the Owner Cost Columns defined for this project, as copied from the CIVTMP template. The default cost method of P is shown for all columns.

Figure A.17: Owner Entry Screen, LESSON Project

3. Press the Tab key until the cursor is positioned in the Escalation cost method field (the one-character field below ESCALTN).

Press **C** and Enter to change the method to compute.

Result: The Escalation fields above the cost columns can now be accessed by the cursor. These fields are only used when the Escalation cost method is set to C.

4. Enter the Escalation information as follows:
 - Type **10/92** in the Escalation Start Date field and press Enter.
 - Type **2919** in the Start Index field and press Enter.
 - Type **10/94** in the End Date field and press Enter.
 - Type **3054** in the End Index field and press Enter.

Result: An Escalation percentage is calculated based on the data entered. This percentage will be used to mark up the total costs of the project for Escalation.

Note: Values for the Index fields may be drawn from any number of published sources. See Section 7.6 of this manual.

5. Press the F10 key twice to exit and save.

Result: The Level 1 title list screen is displayed.

Task 2: Applying at the Lowest Title Level

1. Move down through the database by selecting the following titles:

- From the Level 1 screen, select Major Highway Work.
- From the Level 2 screen, select Roads, Railroads, and Bridges.

Result: The Level 3 screen is displayed, with the highlight on the Roadway Paving title.

2. Press F4 to display the title entry screen in edit mode. Then press Alt+W to display the Owner Cost Screen.
3. An O is currently entered in the Contingency cost method field (the one-character field below CONTINGN). This is a default value indicating that the contingency costs are set at the Owner Cost Level.

So that you can set the cost at the (current) lowest title level, type **P** in this field and press Enter.

Result: The cursor moves to the Contingency percentage field, which is now available for data entry.

4. Type **20** in the field to assign a percentage of 20%. Then press Enter.
5. Press F10 twice to exit and save the change.

Result: The Level 3 title list screen is displayed. An owner's contingency cost markup of 20% will now be applied to the accumulated Direct and Indirect Costs for all items below this title. This cost markup will be listed on the Reports that you print in Lesson 10.

6. To exit the Project Database, press Shift+F10.

Lesson 9: Formatting Reports

Background

The sample LESSON Project is now complete. While the number of cost items in this project is far less than would be required in a real estimate, all the elements of a real estimate are represented. These include:

- Titles at several levels and detail items.
- References to supporting databases.
- A contractor record.
- Direct, Indirect, and Owner Costs.

In Lesson 9 you will use the GOLD Report Writer to specify the format of reports for the project.

Objectives

After successfully completing this lesson, you will be able to:

- Access the Edit Detail Formatting and Edit Other Formatting entry screens.
- Use the fields on these screens to specify format information for project reports.

Reference

Refer to Sections 23.3 through 23.5 for more information on formatting reports.

Starting Point

Begin this lesson at the Main Menu Screen.

Task 1: Formatting the Detail Report

1. Press R to access the Reports Menu. Press E to select the Edit Detail Report Formatting option.

Result: The Detail Report Formatting Screen is displayed (Figure A.18). The screen contains format entries inherited from the CIVTMP template.

Figure A.18: Detail Report Formatting Screen

2. Use the Tab key to move from field to field on the screen. Type **Y** or **N**, followed by the Enter key, to specify the following selections. (For options not indicated, leave the data as is. When you are finished, the screen should look like Figure A.18.)

Row Options

Print Titles at Levels: Type **Y** for Level 3 (only)

Print Totals at Levels: Type **Y** for Level 3 (only)

Print Unit Cost Row: **Y**

Show Cost Codes: **N**

Note: Titles at Levels 1 and 2 are automatically printed in the page heading on Detail Reports, so you do not need to select them for printing here.

UPB Titles

No. of Levels to Print: Type **1**.

Bracket Titles With: Type (and).

3. Press F10 to exit the screen and save the changes.

Result: The Main Menu Screen is displayed. When you print the Detail Report, it will now list titles and subtotals at Level 3. The report will also show a separate Unit Cost column for all cost items, and will display one upper-level title from the Unit Price Database for the cost items copied in from that database. These UPB titles will be bracketed by parentheses.

Task 2: Formatting the Summary Reports

1. From the Main Menu Screen, press R to access the Reports Menu. Move the highlight to accept the Edit Other Formatting option, then Press Enter.

Result: The Other Report Formatting screen is displayed (Figure A.19). The screen contains format entries inherited from the CIVTMP template.

Figure A.19: Other Report Formatting Screen

2. Use the Tab key to move from field to field on the screen. Leave the Column Titles fields as they are. Type the following entries in the Standard Column Widths fields. (Press Enter after typing each value.)

Quantity Columns: **10**

Total Cost Columns: **12**

Unit Cost Columns: **10**

When you are finished, the screen should appear as in Figure A.19.

3. Press the Page Down key to exit the screen and save the changes.

Results:

- The changes you made are saved. When you print the Summary Reports, they will contain the column widths you have specified.
- The Report Title Page Screen (Figure A.20) is displayed. You will use this screen in Task 3 below. (You could also have displayed the screen by exiting to the Main Menu Screen and then choosing Edit Report Title Page from the Reports Menu.)

Task 3: Entering Title Page Information

1. On the Report Title Page Screen, press the Tab key until the cursor is positioned in the Estimated by field.
2. Type your name in the field, then press the Enter key. You can also fill in the other fields if you choose.
3. Press the F10 key to exit and save.

Result: The Main Menu Screen is redisplayed. When you print the reports, you name and any other information you entered will be printed on the title page.

REPORT TITLE PAGE	
FUNCTION	Project : Storage Building
1 HELP	Battalion Headquarters
2 ADD	Fort Stewart
3 TITLES	Georgia
4 EDIT	Designed By : The Architect/Engineer Partners
5 DETAIL	Estimated By : Cost Consultants International
6 LOOKUP	Prepared By : David P. Estimator, Lead
7 NOTES	Date of Escalation Index : 01/31/91
8 SELECT	Effective Pricing Date : 03/15/91
9 MENU	Preparation Date : 03/15/91
10 EXIT	Est Construction Time : 280 Days
	Sales Tax : 4.00%
Project Description; use NOTES <F7> to expand	
EST A PROJECT v5.29	

Figure A.20: Report Title Page Screen

Lesson 10: Printing Reports

Background

Having adjusted report formatting and added title page information in Lesson 9, you are now ready to print the reports.

GOLD allows you to select from a range of available reports for an estimate. In Lesson 10 you will select several reports and print them. To complete the tutorial, you will then examine the printed reports.

Objectives

After successfully completing this lesson, you will be able to:

- Access the Report Selection Screen and use the screen to choose from available reports.
- Access the Run Reports Window and use it to print the selected reports.
- Examine printed reports to see the results of the preceding lessons.

Reference

See Section 23.6 and 23.7 for more information on the topics presented here.

Note: This lesson assumes that you have a printer available and properly configured with GOLD. See Section 25.3 if you need information on setting up a printer.

Starting Point

Begin this lesson at the Main Menu Screen.

Task 1: Selecting and Printing the Reports

1. Press R to access the Reports Menu. Move the highlight to the Select Reports to Print option, then press Enter.

Result: The Report Selection Screen is displayed (Figure A.21). The screen contains entries inherited from the CIVTMP template.

FUNCTION	REPORT SELECTION (PgDn to Print Selected Reports)											
1 HELP	Project Settings :				Profit Guidelines :							
2 ADD	Contractor Settings :				Measurement Units : Original							
3 TITLES	Link Listing :											
4 EDIT	REPORT FORMAT TYPE FOR LEVEL(S)											
5 DETAIL	Direct Indirect Owner 0 1 2 3 4 5 6											
6 LOOKUP	Detail : Y											
7 NOTES	Project : Y											
8 SELECT	Contractor : Y											
9 MENU	Division : Y											
10 EXIT	System : Y											
	2nd View : Y											
	Crew : Y											
	Labor : Y											
	Equipment : Y											
	Prime Labor Cost Level : Y											
Enter Y to select a report showing all chosen project settings												
EST A PROJECT												v5.29

Figure A.21: Report Selection Screen

- Use the Tab key to move from field to field on the screen. Type **Y** to specify the following selections. Where necessary, type N to replace the Ys in other fields. When you are finished, the screen should look like Figure A.21.

Project Settings: **Y**

Detail: **Y**

Project: **Y** for Direct, Indirect, and Owner
Y for Level 3.

Contractor: **Y** for Direct and Indirect
Y for Level 3.

- Press the Page Down key.

Result: The Run Reports Window (Figure A.22) is displayed.

- Type **Test Reports** in the Report Title field and press Enter.
- Press Enter twice to accept the values in the next two fields.

Result: The LESSON project is recalculated and the selected reports are sent to the printer.

FUNCTION		REPORT SELECTION (PgDn to Print Selected Reports)	
1	HELP	Project Settings :	Profit Guidelines :
2	ADD	Contractor Settings :	Measurement Units : Original
3		Link Listing :	
4		Report Title : Military Example Project	
5		Print Device : LPT1	
6		Printer Setup : B - HP LJ II/III Landscape	
7	NOTES	2nd View : Y	
8	SELECT	Crew :	Y N N N N N N
9	MENU	Labor :	
10	EXIT	Equipment :	
		Prime Labor Cost Level :	
Enter a secondary title for the report(s). Optional. EST A PROJECT v5.29			

Figure A.22: Run Reports Window

Task 2: Examining the Reports

When the reports have been printed, examine them carefully to see the results of the various selections and entries you have made throughout this tutorial.

Notice in particular the following points:

- The entire set of reports includes a title page. This page contains the information you entered on the Reports Title Page screen.
- The reports are also printed with a contents page. The number of title levels included in the contents for the Detail Report is specified on the Detail Report Formatting Screen.
- The Project Settings Report shows the entries made on the following screens:
 - Name Project Columns
 - Set Breakdown Structure
 - Select 2nd View Columns (Not used in this tutorial)
 - Detail Report Formatting
 - Other Report Formatting
 - Report Selection
- This report also shows the settings of Owner Costs in the project.

- The Detail Report lists all the cost items in the estimate and all three levels of titles (with Levels 1 and 2 shown in the page heading). It also shows a separate Unit Cost row, and one level of UPB titles for those cost items copied in from the Unit Price Database.
- The Project Summary Reports break out the estimate by Direct, Indirect, and Owner Costs. The cost columns are those shown on the Name Project Columns Screen.
- The Contractor Summary Reports show the Direct and Indirect Cost (cost markup) information for the PV contractor.

APPENDIX B

VALID UNITS OF MEASURE

Introduction

The following tables list the Metric and corresponding U.S. units of measure recognized by GOLD, along with their abbreviations. Use these abbreviations in the Unit of Measure fields on GOLD screens to assure proper calculation of values.

Note: You can convert an estimate's units of measure from Metric to U.S. or U.S. to Metric prior to printing reports by using the Measurement Units field on the Report Selection Screen.

Area

Metric		U.S.	
Abbry.	Unit	Abbry.	Unit
CM2	Square Centimeters	SI	Square Inches
M2	Square Meters	SF	Square Feet
		CSF	100 Square Feet
		MSF	1000 Square Feet
		SY	Square Yards
		CSY	100 Square Yards
		MSY	1000 Square Yards
HEC	Hectars	ACR	Acres
KM2	Square Kilometers	MI2	Square Miles

Distance

Metric		U.S.	
Abbrev.	Unit	Abbrev.	Unit
MM	Millimeters	IN	Inches
CM	Centimeters	FT	Feet
M	Meters	YD	Yards
		LF	Liner Feet
		VLF	Vertical Linear Feet
		CLF	100 Linear Feet
		MLF	1000 Linear Feet
KM	Kilometers	MI	Miles (Statute)

Flow

Metric		U.S.	
Abbrev.	Unit	Abbrev.	Unit
CCS	Cubic Centimeters/Second		
CMM	Cubic Meters/Minute	CFM	Cubic Feet/Minute
CMH	Cubic Meters/Hour	MF3	1000 Cubic Feet/Minute

Liquid

Metric		U.S.	
Abbrev.	Unit	Abbrev.	Unit
LIT	Liters	GAL	Gallons (US)

Miscellaneous

ABBREV.	UNIT
EA	Each
LS	Lump Sum
SET	Set
PR	Pair
OPN	Opening
FLR	Floor
SQ	Square (Roofing)
SEA	Seat
RSR	Riser
LAN	Lane
BBL	Barrel

Time

ABBREV.	UNIT
HR	Hours
DAY	Days
WK	Weeks
MO	Months
YR	Years

Volume

Metric		U.S.	
Abbrev.	Unit	Abbrev.	Unit
CC	Cubic Centimeters	CI	Cubic Inches
M3	Cubic Meters	CF	Cubic Feet
		CCF	100 Cubic Feet
		MCF	1000 Cubic Feet
		CY	Cubic Yards
		CCY	100 Cubic Yards
		MCY	1000 Cubic Yards
		BF	Board Feet
		MBF	1000 Board Feet

Weight

Metric		U.S.	
Abbrev.	Unit	Abbrev.	Unit
G	Grams	OZ	Ounces
KG	Kilograms	LB	Pounds (Avoirdupois)
MT	Metric Tons	TON	Tons (Short)

APPENDIX D

ERROR MESSAGES

The following pages contain a listing of MCACES GOLD error messages, with explanations of the source of the error. Where appropriate, recommended methods of correction are also provided. See the last page for PKZIP error conditions.

100 Creating File

The program could not create a needed file, or attempted to create a file that is already open. Often caused by insufficient disk space.

Recommended Action: Check to ensure the disk is not full. Also, see Error 120.

120 Opening File

The program attempted to open a file that does not exist; or tried to open more files than the operating system currently allows.

Recommended Action: Be sure the CONFIG.SYS file contains a FILES=45 command (with a value of 45 or higher).

140 Reading from File

May be caused by disk failure. May also be caused by an invalid database index file (.NTX file), which will result if the DOS Copy command is used to copy a database index file instead of the Copy a Database option on the Services Menu.

Recommended Actions: Verify that the disk drive is operating correctly. Use the Reset Database Index option on the Services Menu to reset the indexes for the database.

150 Seeking to File Position

See Error 140.

160 Writing to File

The program has attempted to write to a full disk.

Recommended Action: Clear space on the hard disk.

180 Closing File

The program was unable to close a file.

Recommended Action: Try reindexing the database.

200 File is not a Database

The program attempted to open a file that is not a valid database file. Can be caused when an MCACES GOLD database is copied with the DOS Copy command instead of through the Services Menu option.

Recommended Action: Delete the database and reload from backup.

240 No Open Database

Internal program error.

Recommended Action: Contact BSD.

260 Record Length is Too Large

The current database is corrupted. See Error 200.

270 Unrecognized Field

An attempt was made to merge records from a database from a prior version of MCACES GOLD that had not been converted for Version 5.20. Or the database may be corrupted.

Recommended Action: Select the database in the database window on the Main Menu Screen. This will cause MCACES GOLD to automatically convert the database. See also Error 200.

300 Building Index File

The program could not create an index file for a database due to insufficient memory / disk space. See Error 100.

310 Closing Index File

The program could not close an index file.

Recommended Action: Try reindexing the database.

320 File is not an Index File

The program could not open an index file for a database. See Error 200.

330 Index File is out of Date

The index file for a database does not contain a key for one or more records in the database. Can be caused by copying a database through DOS instead of through the Services Menu option.

Recommended Action: Choose the Reset Database Index option from the Services Menu.

335 Index File Record does not Exist

The index file specifies a record not found in the database. Can be caused by copying a database through DOS instead of through the Services Menu option.

Recommended Action: Choose the Reset Database Index option from the Services Menu.

380 Seek on Database with no Index File

Internal Program Error.

Recommended Action: Contact BSD.

400 Locking a File

The program could not lock a database or index file in order to prevent two users from accessing the same record at the same time.

Recommended Action: Retry the action.

450 Unlocking a File

The program was unable to unlock a locked file.

Recommended Action: Call BSD.

900 Out of Memory

The process could not continue due to insufficient memory.

Recommended Action: Exit MCACES GOLD and use MAPMEM.COM to check the available free memory.

920 Memory Allocation Error

Internal program error.

Recommended Action: See Error 900. If error persists, contact BSD.

950 Overwritten Memory

Internal program error.

Recommended Action: See Error 900. If error persists, contact BSD.

1000 Not Enough Memory to Sort

See Error 900.

1010 Too Many Records in Sort

CodeBase internal error.

Recommended Action: Contact BSD support if error persists.

1001 Bad file allocation table

The file allocation table on the hard drive is corrupted.

Recommended Action: Refer to your DOS manual.

1021 Job Data is corrupted

The database that the program attempted to access is corrupted.

Recommended Action: Try turning off the Project Settings when printing reports.
Contact BSD.

1022 Not Enough Memory

See Error 900.

1023 Field Name not located

See Error 270.

1024 COMPOSER.INI file is corrupted, line: xxxx

The COMPOSER.INI file is corrupted at the indicated line.

Recommended Action: Delete the COMPOSER.INI file, then restart MCACES GOLD. The system will recreate the file. May also occur if files from two versions of the software are intermingled. If this is so, delete the files and reinstall the software from diskette.

1025 Can't open COMPOSER.INI for reading

Too many files are open. See Error 120.

1026 Can't create COMPOSER.INI

The program did not find a COMPOSER.INI file and was unable to create one. See Error 100.

1027 Exceeded max index count for a .DBF

Internal program error; possibly a bad index, perhaps pointing to an index beyond the maximum count.

Recommended Action: Reset database indexes. Contact BSD if the error persists.

1028 Bad Index Id passed

Internal program error.

Recommended Action: Contact BSD if the error persists.

1029 Couldn't Open...

The printer was not found or not ready, or the printer device driver could not be opened.

Recommended Action: Be sure the printer is properly connected and ready. Also, see Error 100.

1031 File could not be Opened

The program could not open the indicated database file. See Error 100.

2001 Another station has the data locked

Another user on the network is currently working with the data record that you tried to access.

Recommended Action: Retry the action, or try again at a later time.

2002 Non-disk character device read/write error

Probable hardware error.

Recommended Action: Check the cable connection and the computer setup and switch settings.

2003 Attempt to write to write-protected disk

An attempt was made to write to a write-protected disk.

Recommended Action: Choose another disk drive or remove the write-protect tab.

2004 Disk drive not ready

The selected disk drive is not available.

Recommended Action: If the drive is a floppy drive, be sure a formatted diskette is correctly inserted.

2005 Printer out of paper

Recommended Action: Load paper into the printer. Then press Y to continue.

2006 Disk write error

The program could not write to the selected disk drive.

Recommended Action: Verify that the disk is not full. See also Error 2008.

2007 Disk read error

The program could not read from the selected disk drive. See Error 2008.

2008 General failure in disk read/write

A hardware failure has occurred on the selected disk drive.

2009 Printer not ready

Recommended Action: Be sure the printer is properly connected and turned on. Also, be sure the printer setup information is correct, using the Edit Printer Setup Table option on the Admin Menu.

2010 Error writing to Printer

Most likely caused by a hardware failure. Check the printer and cable connection.

2025 Bad Unit of measure on all Engl/ all Met run

The Report Writer encountered a unit of measure that it could not convert from U.S. to Metric or Metric to U.S. units.

2027 Exceeded allowable width in detail by 1.

The total report widths of the direct cost columns is too large.

Recommended Action: Either change to landscape mode to print reports or decrease the report width of one or more of the direct cost columns.

2029 Database unavailable for reporting

A database needed for the reports was not selected in the database window.

3101 Database file(s) missing

A file was deleted or a diskette removed prior to completion of the Copy a Database process.

3102 Not enough free disk space

The current processing cannot be completed due to lack of disk space.

Recommended Action: Clear disk space on the hard drive, then repeat the process.

3104 DsDebug Error:

Internal program error.

Recommended Action: Contact BSD.

3111 Error in accessing <database name> - process failed

An attempt to read or write to the named database failed.

Recommended Action: Use the Reset Database Index option on the Services Menu to reset the indexes for the database.

3112 Database has invalid format.

One possibility is that the record widths are in invalid width.

Recommended Action: Call BSD.

3113 Cannot process on project information record

The current process cannot be performed on the Project Information Record.

Recommended Action: Select a title at another level of the database.

3114 Marked titles can't be added onto cost items

An attempt was made to copy, move, or merge titles to the detail level.

Recommended Action: Repeat the process, choosing a title level as the target.

3115 No titles can be added below this level

An attempt was made to add titles beneath a lowest-level title (one that already has detail items directly beneath it).

Recommended Action: If the database does not have six title levels defined, you can add levels through the Set Breakdown Structure option on the Prepare Menu. Alternately, you can choose to copy, move, or merge to a higher database level.

3116 Cannot copy single detail item(s) in this database

Detail items without their parent titles can only be copied in the Project and Models Databases.

3117 Cannot add title element onto this level

An attempt was made to copy or move an element in the Crews Database to a title level other than Level 2. In the Crews Database, you can only copy or move an element to Level 2, so that the new title becomes a Level 2 title, with detail directly below it.

3118 Cannot add elements under deleted title

An attempt was made to copy, move, or merge data to a destination below a deleted title.

Recommended Action: Choose a different destination, or use the Ctrl+F4 function to undelete the title.

3119 Cannot add contractor elements onto other title

Contractor elements can only be added under the Project Information Record (in the Project Database) or Models Master Record (in the Models Database).

3120 Marked title has no detail directly under

An attempt was made in the Assemblies, Crews, Labor, or Equipment Rates Database to copy or move a title without detail directly beneath. This is not valid in these databases.

3121 No detail items can be added below this level

The title chosen as the destination has subtitles. Therefore, detail items cannot be added there.

Recommended Action: Choose a different title as the target.

3122 Cannot add title elements onto contractor

An attempt was made to move or copy a Direct Cost title onto a Contractor record.

Recommended Action: Choose a different title as the target.

3123 Title has cost items - cannot add titles at this level

An attempt was made to copy or move titles beneath a parent title that has detail items directly below it.

Recommended Action: Choose a different parent title, without detail under it, as the target.

3124 No elements added to protected database

The current user's permission settings do not allow them to modify the chosen database type.

3125 Cannot move deleted element

An attempt was made to move a deleted title element.

Recommended Action: If you want to move the element instead of deleting it, first use the Ctrl+F4 function to undelete the title.

3126 Range overlaps with existing element

An attempt was made to move a Unit Price Database element to a location where records already exist. That is, the records created by the Move operation would have overwritten existing records.

3127 Cannot move - would capture existing data

An attempt was made to move a Unit Price Database element to a location where that would violate existing data.

3128 Target has no immediate parent title

An attempt was made to move a Unit Price Database element to a location where no parent title would exist for the element. This is not allowed.

3129 Parent title with same ID already exists

An attempt was made to promote a Unit Price Database title to a location that would overwrite the existing parent title's ID.

3130 Cannot demote first element at a level

An attempt was made to demote a Unit Price Database title that is the first title beneath a parent title (that is, the first title listed on a list screen). You cannot demote the first title because demoting a title makes that title a subtitle to the immediately preceding title at its current level, and the first title has no title immediately preceding it at the same level preceding it.

3131 Cannot promote top level element

An attempt was made to promote a Unit Price Database title from Level 1. This is not possible.

3132 Cannot demote element containing a level 6 title

An attempt was made to demote a Unit Price Database title element that contains a title at Level 6. This would result in loss of the Level 6 title(s) and is not allowed.

3133 Error in deleting existing database

An attempt was made to Extract data to a database with the ID of an existing database. This would result in deleting the existing database and is not allowed if the database is protected (that is, read only).

3134 Extract range is not located in database

While using the Extract From Database Utility, a range of IDs was entered in the Extract Range fields and these records were not found in the database.

3135 Invalid database path and ID

The specified database path and ID are not in valid DOS format.

3136 Database not found

The specified database does not exist.

3137 Database path and ID information incomplete

The path and ID information do not completely specify a valid database.

3138 Duplicated source and target database path/ID

The chosen source and target databases are the same.

Recommended Action: Select a different database as the source or target.

3139 Component database protected; cannot proceed process

The current user's permission settings do not allow them to modify the chosen database type.

3141 Unit Price and Crews (or other) database currencies different.

This occurs when repricing if the currencies on all supporting databases are not the same.

Recommended Action: Check the Edit screen of all supporting databases to be sure the currencies are the same. If problem continues Contact BSD.

PKZIP ERROR CONDITIONS

PKZIP:

- 0 No error
- 1 Bad file name or file specification
- 2, 3 Error in ZIP file
- 4 - 11 Insufficient Memory
- 12 No files were found to add to the ZIP file,
or no files were specified for deletion
- 13 File not found. The specified ZIP file
or list file was not found
- 14 Disk full
- 15 ZIP file is read-only and can not be modified
- 16 Bad or illegal parameters specified
- 17 Too many files

PKUNZIP:

- 0 No error
- 1 Warning error (such as failed CRC check)
- 2, 3 Error in ZIP file
- 4 - 8 Insufficient memory
- 9 File not found. No ZIP files found.
- 10 Bad or illegal parameters specified
- 11 No files found to extract / view, etc.
- 50 Disk full.
- 51 Unexpected EOF in ZIP file.

INDEX

Numeric

2nd View. *See Volume 2.*

Symbols

@, (Cost Override indicator), 6-8

A

About this manual, 1-3

Action key window, 3-2, 3-16

Action keys, 3-16 to 3-17

Add Detail, 15-5

Add/Edit Menu

accessing, 15-1

Add Detail, 15-5

Add Item, 15-4

Add Subtitle, 15-5

Edit Item, 15-2

Edit / View Notes, 15-2

Edit Other, 15-4

Edit Owner, 7-20, 15-4

Field Restore, 15-6

Field Undo, 15-6

purpose, 15-1

Resize Browse, 15-6

Screen Restore, 15-6

Select From List, 15-5

Add (F2) function key, 3-16, 15-4

Adding

assemblies

Project Database, 6-45

Assemblies Database, 9-2, 14-5

cost items

Project Database, 6-9 to 6-18

supporting databases, 9-4 to 9-5

crew members, 9-4 to 9-5, 11-9

crews, 9-2, 11-6

databases

Project, 5-2 to 5-5, 8-3

supporting, 9-8

modifiers, 6-51, 10-16

parameters. *See Volume 2.*

titles

Project Database, 6-3 to 6-8

supporting databases, 9-2

users to the system, 25-3

Add Item, 15-4

Add mode, 3-10 to 3-11

Add Modifier, 6-51, 10-16, 19-10

Add Parameter. *See Volume 2.*

Add Subtitle, 15-5

Add Vendor. *See Volume 2.*

Additives. *See Alternate Costs.*

Adjusting material prices, 10-4 to 10-7.

See also Volume 2.

Adjust Pricing

examples, 19-8

for shipping costs, 6-39 to 6-44

for other costs, 19-7 to 19-10

Adjust Pricing Screen, 6-42, 19-7

Admin (Administrative) Menu

accessing, 25-1

Edit Bond and Profit Tables, 25-7

Edit Digitizer Setup. *See Volume 2.*

Edit Permission Settings, 25-3

Edit Printer Setup Table, 25-9

purpose, 25-1

restricting use of, 25-1

Alternate Costs, 5-21, 6-53 to 6-54

Alt key, 3-23

Apprentice rates, 6-12, 9-10

Army Corps of Engineers

equipment cost calculations, 13-1, 13-5

Profit Weighted Guidelines, 7-13, 25-8

Arrow keys, 3-24 to 3-25

Assemblies

about, 6-45

adjusting linked values, 6-46

classification of, 14-3

copying into project, 6-45

example of use, 14-1

Assemblies Database

- adding to, 9-2 to 9-5, 14-5 to 14-13
- browse mode screen, 14-3
- definition, 3-3
- Assemblies Database (continued)
 - deleting from, 9-7,
 - detail items, 14-8
 - editing, 9-6, 14-5 to 14-13
 - Lookup to, 16-6
 - purpose, 14-1
 - structure of, 14-3
 - titles, 14-5
 - supplied with GOLD, 14-2
 - using multiple, 9-12
- At sign (@), 6-8

B

- Backing up data, 24-5, 24-6 to 24-9
- Backup reports, 23-18, 23-48
- Batch file
 - for the mouse, 2-8, 2-9
 - startup, for networks, 2-12
- Bond
 - Bond classes, 7-15
 - computing costs, 7-15 to 7-16
 - cost column, 5-15
 - editing Bond data, 25-8
 - examples, 7-15 to 7-16
- Bond and Profit Tables Screen, 25-7
- Browse mode, 3-11
- Browse mode screen, 3-7, 3-11
- Building systems classification. *See also Volume 2.*
 - about, 14-3,
 - System Summary Report, 23-44.

C

- CACES
 - classification system, 14-3, 14-4
 - importing from. *See Volume 2.*
- Calculator. *See Volume 2.*
- Canceling screen changes, 15-6
- Cancel Marks, 18-2

- CG_VIEWR.COM, 23-26 to 23-27
- Changing data. *See editing.*

- Columns. *See also Cost columns.*
 - standard width of, 23-11
 - titles of, 21-11
- Compare Two Databases. *See Volume 2.*
- COMPOSER command, 2-7
- COMPOSER GOLD. *See GOLD.*
- COMPOSER.INI file, 2-10, 2-13 , 25-3
- COMPOSER PLUS. *See Volume 2.*
- Compute Menu. *See also Volume 2.*
 - accessing, 19-1
 - Add Modifier, 6-50 to 6-51, 10-16
 - Add Parameter. *See Volume 2.*
 - Adjust Pricing, 19-7
 - Edit Modifier, 6-50 to 6-53, 10-15 to 10-16
 - Edit Parameters. *See Volume 2.*
 - Link Quantity, 6-35, 6-46, 19-6. *See also Volume 2.*
 - purpose, 19-1
 - Recalculate, 19-2
 - Reprice L & E, 19-5
 - Reprice Material, 19-4
- CONFIG.SYS file, 2-4
- Construction Specifications Institute (CSI), 10-1, 10-2
- Contingency cost column, 5-16 . *See also Volume 2.*
- Contingency Notes, 7-23 to 7-25
- Contract costs, 7-19
- Contractor code. *See Contractor ID.*
- Contractor entry screens
 - primary, 7-5
 - secondary, 7-12
- Contractor ID, 6-7, 6-15 , 7-7 to 7-8, 7-17 to 7-18.
- Contractor Overhead. *See Overhead.*
- Contractor Override, 6-7, 7-18
- Contractor profit. *See Profit.*
- Contractors. *See also Indirect Costs.*
 - applying to costs, 7-17 to 7-18
 - defining, 7-3 to 7-16

- parent, 7-3
- prime, 7-3 to 7-4
- sub, 7-3
- tiering of, 7-3 to 7-4, 23-38 to 23-41
- Contractor Settings Report, 23-16, 23-51
- Contractor summary reports, 23-17 , 23-38 to 23-41
- Control key, 3-23
- Convert to MasterFormat 88. *See* Volume 2.
- Converting databases, 2-5. *See also* Volume 2.
- Copy, 18-3 to 18-6. *See also* Copy a Database; Copy a File To; Extract To.
- Copy a Database, 9-12, 24-5
- Copy Project Notes, 22-7
- Corps of Engineers. *See* Army Corps of Engineers.
- Cost columns
 - Direct Costs, 5-13 to 5-14
 - examples, 5-6
 - Indirect Costs, 5-15
 - Owner Costs, 5-16
 - renaming predefined, 5-16
 - user- named, 5-12
- Cost fields, 6-2, 6-8, 6-16
- Cost items. *See* Detail items.
- Cost markups, 6-8, 7-3, 23-30. *See also* Indirect Costs.
- Cost method
 - Indirect Costs, 7-9
 - Owner Costs, 7-21
- Cost of facilities capital, 13-8
- Cost override, 6-8. *See also* UPB Cost Override.
- Costs
 - extended, 6-8, 6-16
 - storage and display of, 6-2
 - unit, 6-8, 6-16
- Create a DOS Shell, 26-2
- Crew backup reports, 23-18, 23-48
- Crew entry screen, 11-7
- Crew member entry screen, 11-9
- Crew output, 6-26 to 6-28
- Crew productivity, 9-10, 11-8
- Crews
 - adjusting output, 6-26
 - as assemblies. *See* Crews as Assemblies.
 - crew members, 6-33, 11-2, 11-9 to 11-12
 - definition, 6-25 , 11-2
 - examples of use, 6-27, 11-3
 - productivity, 9-10, 11-8
 - referencing in a cost item, 6-26
 - using in a project, 6-25
- Crews as Assemblies
 - about, 6- 29
 - adjusting linked values, 6-34
 - copying into project, 6-29 to 6-31
 - example of use, 6-33
 - redefining in the project, 6-29
- Crews Database
 - adding to, 9-2 to 9-5, 11-6 to 11-12
 - browse mode screen, 11-5, 11-2
 - crew members, 11-9 to 11-12
 - crew titles, 11-6 to 11-9
 - definition, 3-4
 - deleting from, 9-7
 - detail items, 11-9 to 11-12
 - editing, 9-6, 11-6 to 11-12
 - Lookup to, 16-7
 - purpose, 11-1
 - structure of, 11-4 to 11-5
 - titles, 116
 - supplied with GOLD, 11-1
 - upper-level titles, 11-6
 - using multiple, 9-12
- CSI (Construction Specifications Institute), 9-1
- CSI Division fields. *See* Volume 2.
- CSI Divisions
 - compared with building systems, 14-3
 - Division summary reports, 23-42
 - in Unit Price Database, 10-1, 10-2
 - use with Adjust Pricing, 19-9
 - use with shipping rates, 6-43
 - on Vendor Screens. *See* Volume 2.
- CSI Sort Detail Report, 23-12d
- Ctrl (Control) key, 3-23

Currency conversion, 9-10 to 9-11. *See also Volume 2.*

D

DATA directory, 2-4

Database Edit Screens

- accessing, 9-8

- adding a new database, 9-8

- currency conversion, 9-10 to 9-11

- example, 9-7

- field descriptions, 9-9 to 9-10

- Project Database, 5-2

- purpose, 9-7

- supporting databases, 9-7 to 9-11

Database ID.

- about, 3-2, 6-3

- supporting databases, 9-9

- Project Database, 5-4, 6-14

- Unit Price Database, 6-14, 10-3, 10-9,

 - 19-8, 22-6, 23-8, 23-42

- use with Adjust Pricing, 19-8

- use with Copy, 18-3

- use with Copy a Database, 24-5

- use with Extract To, 18-9

- use with Find Keyword, 17-3

- use with Lookup, 6-21

- use with Merge, 18-8

- use with Print Database Listings, 23-24

Database menus, 3-21

Databases

- backing up, 24-

- converting, 2-5. *See also Volume 2.*

- copying, 24-5

- diagram, 3-5

- erasing, 24-14

- loading from compressed, 24-10 to 24-11

- packing, 24-13

- resetting indexes of, 24-12

- saving to compressed, 24-6 to 24-9

- selecting, 24-3

- structure of, 3-6 to 3-8

- types of, 3-3 to 3-5

Database window, 3-2

- Deleting
 - canceling deletion, 6-24, 18-7
 - changes, 15-6
 - effect of, 18-7
 - entire databases, 24-14
 - in Project Database, 6-23 to 6-24
 - in supporting databases, 9-7
 - DEMAIR Project Database, 3-6 to 3-15, 23-2
 - Demote title. *See Volume 2.*
 - Depreciation of equipment, 13-8
 - Detail (F5) function key, 3-17, 17-2
 - Detail item entry screens
 - Assemblies Database
 - primary, 14-8
 - secondary, 14-11
 - Crews Database, 11-9
 - Equipment Rates Database
 - primary, 13-6
 - secondary, 13-10
 - Labor Rates Database, 12-4
 - Project Database
 - primary, 6-9
 - secondary, 6-13
 - Unit Price Database
 - primary, 10-8
 - secondary, 10-12
 - Detail items. *See also Cost items.*
 - about, 3-6 to 3-11
 - adding
 - Project Database, 6-9 to 6-18
 - supporting databases, 9-4 to 9-5
 - Assemblies Database, 14-8 to 14-13
 - Crews Database, 11-9 to 11-12
 - Equipment Rates Database, 13-5 to 13-13
 - Labor Rates Database, 12-4 to 12-6
 - Project Database, 6-9 to 6-18
 - Unit Price Database, 10-8 to 10-13
 - creating, 6-13, 9-4
 - deleting
 - Project Database, 6-24
 - supporting databases, 9-7
 - editing
 - Project Database, 6-23
 - supporting databases, 9-6
 - Detail items (continued)
 - user-defined, 6-13
 - Detail level, 3-6 to 3-11
 - Detail Report
 - cost markups on, 23-30
 - description, 23-30
 - formatting, 23-6 to 23-9
 - examples, 23-31, 23-32
 - Detail Report Formatting Screen, 23-6
 - Detailless Assemblies, 14-16
 - Digitizer. *See Volume 2.*
 - Digitizer Module. *See Volume 2.*
 - Direct Costs
 - column types, 5-13 to 5-14
 - summary report, 23-36
 - working with, 6-1
 - Directories, DOS
 - created by installation, 2-4
 - GOLD startup, 2-5, 2-11
 - Disk space requirements, 2-1
 - Distributed costs. *See Indirect Costs; Owner Costs.*
 - Division summary reports, 23-42 to 23-43
 - DOS,
 - Set Command, 2-2
 - Version required, 2-1
 - DOS Menu
 - accessing, 26-1
 - Create a DOS Shell, 26-2
 - purpose, 26-1
 - Run Communications, 26-2
 - Run RACES, 26-3
 - Quit GOLD, 26-4
 - DOS Shell, 26-2
 - Down a Level, 17-5
- ## E
- Economic Key, 13-8
 - Edit Bond and Profit Tables, 25-7
 - Edit Detail Report Formatting, 23-6
 - Edit Digitizer Setup Table. *See Volume 2.*

Edit (F4) function key, 3-17, 15-2
 Edit Help, 21-3
 Editing
 Detail Report format, 23-6
 Digitizer Setup Table. *See Volume 2.*
 Owner Costs, 7-19 to 7-25
 in the Project Database, 6- 23
 summary report formats, 23-10
 supporting databases, 9- 6
 permission settings, 2-13, 25-3 to 25-6
 Edit Item, 15-2
 Edit mode, 3-9 to 3-11
 Edit Modifier, 6-49 to 6-52, 10-15
 Edit / View Notes, 15-2 to 15-4
 Edit Other Formatting, 23-10
 Edit Owner, 7-19 to 7-25
 Edit Parameter. *See Volume 2.*
 Edit Permission Settings, 25-3 to 25-6
 Edit Printer Setup Table, 25-9 to 25-11
 Edit Report Title Page, 23-13 to 23-15
 Edit Vendor. *See Volume 2.*
 Element
 Copy function, 18-3, 18-5
 definition, 6-3
 linking. *See Volume 2.*
 Move function, 18-6
 Next Element, 17-6
 Previous Element, 17-9
 Print Single Element, 20-3
 ENG3086 Interface. *See Volume 2.*
 Enter key, 3-24
 Entry screens, 3-9 to 3-11
 EP-1110-8, 13-1, 13-5
 EQTABLES Directory, 2-4
 Equipment. *See also Equipment Rates Database.*
 area factors, 13-14
 average rate, 13-5, 13-9
 category, 13-8
 cost computation, 13-5
 depreciation of, 13-8
 fuel type and size, 13-11
 model number, 13-10
 operating costs, 13-8 to 13-9
 ownership costs, 13-8
 severe rate, 13-5, 13-8 to 13-9
 shipping weight of, 13-10
 standby rate, 13-5, 13-9
 subcategory, 13-8
 Equipment backup reports, 23-18 , 23-50
 Equipment cost column, 5-13
 Equipment ID, 13-7
 Equipment items, copying into project, 6-11 to 6-12
 Equipment Rates Database
 adding to, 9-2 to 9-5, 13-3 to 13-13
 area factors, 13-14
 attachments, 13-13
 browse mode screen, 13-2, 13-13
 cost computation, 13-5
 database edit screens, 13-14 to 13-17
 definition, 3-4
 deleting from, 9-7
 detail items,
 primary entry screen, 13-5 to 13-9
 secondary entry screen, 13-9 to 13-12
 editing, 9-6, 13-3 to 13-13
 linked items, 13-12
 Lookup to, 16-7
 operators, 13-11
 purpose, 13-1
 structure of, 13-2
 titles, 13-3 to 13-4
 supplied with GOLD, 13-1
 using multiple, 9-12
 Equivalent Shipping Weight, 6-41, 10-13
 Erase a Database, 24-14
 Erasing. *See Deleting.*
 Error Code Listing. *See Appendix D.*
 Escalation. *See also Volume 2.*
 cost column, 5-16
 calculating, 7-22
 Esc (Escape) key, 3-24
 Estimate. *See Project Database.*
 Estimate Type
 A - Crews With Auto Reprice, 5-11
 C - CACES Mode, 5-11
 changing, 5-12

- K - Crews With Reprice Key, 5-10
 - purpose, 5-8
- U - Unit Costs; No Crews, 5-10
- Estimating, overview, 4-1 to 4-2
- Exit Database, 17-5
- Exit (F10) function key, 3-17, 17-4
- Exiting GOLD, 2-8, 26-4
- Exit Screen, 17-4
- Expanded memory, 2-2
- Exponential Notation, 6-2
- Export Schedule Data. *See Volume 2.*
- Export to ENG3086 Format. *See Volume 2.*
- Extended costs, 6-8 to 6-16
- Extended memory, 2-2
- Extract From Database. *See Volume 2.*
- Extract To, 18-9 to 18-10

F

- Field Restore, 15-6
- Field Undo, 15-6
- Find Keyword, 17-3
- Floppy disks
 - GOLD package, 2-3
 - installation from, 2-5 to 2-7
 - loading databases from, 24-10 to 24-11
 - saving databases to, 24-6 to 24-9
- Foreman rates, 6-12, 9-10
- Fringe benefits, 12-6
- Function keys, 3-16 to 3-17. *See also Action key window; keys.*
- Function menus, 3-18 to 3-20

G

- Get From Table, 20-4
- Go To Menu
 - 2nd View, 17-4
 - accessing, 17-1
 - Browse Detail, 17-2
 - Down a Level, 17-5
 - Exit Database, 17-5

- Exit Screen, 17-4
- Find Keyword, 17-3
- List Titles, 17-2
- Next Element, 17-6
- Previous Element, 17-5
- purpose, 17-1
- Top of Database, 17-5

GOLD

- capabilities, 1-1 to 1-2
- databases, 3-3 to 3-5
- definition, 1-1
- disk space, 2-1
- documentation, 1-3 to 1-4
- DOS level, 2-1
- exiting, 2-8
- hardware, 2-1 to 2-3
- installation
 - on a network, 2-9 to 2-14
 - on a single PC, 2-3 to 2-7
- Main Menu Screen, 3-2
- multi-user capability, 2-3
- new features, 1-5 to 1-12
- operating system, 2-1
- Report Writer, 19-2, 23-2
- requirements, 2-1 to 2-2
- starting, 2-7
- tutorial, A-1
- Version 5.20, 1-5 to 1-12

GOLD Directory, creating, 2-5

H

- Hard disk, 2-1
- Hardware requirements, 2-1 to 2-3
- Help
 - changing Help, 21-3
 - Help screens, 3-12
 - Keys Help, 21-3
 - layers of, 21-2
 - using Help, 21-2
- Help (F1) function key, 21-2
- Help Menu
 - accessing, 21-1
 - Edit Help, 21-3
 - Help, 21-2

Keys Help, 21-3
purpose, 21-1
Show Memory, 21-4

I

Import from CACES ASCII. *See*
Volume 2.
Import from ENG3086 Format. *See*
Volume 2.
Indexes, database, 24-12
Indirect Costs. *See also Contractors.*
 column types, 5-15
 contractors' costs, 7-2
 summary report, 23-34
 working with, 7-1, 7-3 to 7-19
Inherited characteristics, 5-1, 5-8
.INI file, 2-10, 2-13 , 25-3
Inspection costs, 5-16
Installation
 on a network, 2-9 to 2-14
 on a single PC, 2-3 to 2-7

K

Key combinations, 3-23
Keys
 action, 3-16 to 3-17
 Alt (Alternate) 3-23
 Ctrl (Control), 3-23
 descriptions, 3-16 , 3-24
 for editing Help, 15-3
 for editing Notes, 15-3
 function, 3-16 to 3-17
 Shift, 3-23
Keys Help, 21-3
Keywords, searching for, 17-3

L

Labor backup reports, 23-18, 23-49
Labor cost column, 5-13
Labor Cost-to-Prime
 backup report, 23-50

Labor ID, 12-5
Labor items
 apprentice rates, 6-12, 9-10
 copying into project, 6-11 to 6-12
 foreman rates, 6-12, 9-10
Labor items (continued)
 laborer rates, 6-12, 9-10
Labor Rates Database
 adding to, 9-2 to 9-5, 12-3 to 12-6
 browse mode screen, 12-2, 12-6
 database edit screen, 9-7 to 9-11
 definition, 3-4
 deleting from, 9-7
 detail items, 12-4 to 12-6
 editing, 9-6, 12-3 to 12-6
 Lookup to, 16-6
 overtime computed in, 12-5
 purpose, 12-1
 structure of, 12-2
 titles, 12-3
 supplied with GOLD, 12-1
 using multiple, 9-12
Laborer rates, 6-12, 9-10
LANs. *See Networks.*
Learning GOLD, A-1
Levels
 copying data, 18-5 to 18-6
 database levels, 3-6 to 3-8
Link Element. *See Volume 2.*
Link Quantity. *See also Volume 2.*
 with assemblies, 6-46 to 6-48
 with crews as assemblies, 6-33 to 6-36
List screens, 3-6 to 3-8, 3-11
Lookup
 from the Project Database, 6-19 to 6-22
 general instructions, 16-3 to 16-5
Lookup (F6) function key, 3-17
Lookup Menu
 Abandon Lookup, 16-7
 accessing, 16-1
 Assemblies, 16-6
 Confirm Lookup, 16-7
 Crews, 16-7
 Equipment, 16-7

- Labor Rates, 16-6
- Models. *See Volume 2.*
- Project, 16-7
- purpose, 16-1
- Unit Prices, 16-6

M

- Main Menu Screen, 3-2
- Manhours cost column, 5-13
- Manual, about, 1-3
- Mark, 18-2
- Mark Menu
 - accessing, 18-1
 - Cancel Marks, 18-2
 - Copy, 18-3 to 18-5
 - Delete, 18-7
 - Demote Title. *See Volume 2.*
 - Extract To, 18-9 to 18-10
 - Mark, 18-2
 - Merge From, 18-7 to 18-8
 - Move, 18-6
 - Promote Title. *See Volume 2.*
 - purpose, 18-1
 - View Marks, 18-2
- Markups at levels, 23-12c
- Markups, cost. *See Cost Markups, Indirect Costs.*
- Material backup. *See Volume 2.*
- Material cost column, 5-14
- Material indicators. *See Material prices, adjusting.*
- Material prices, adjusting, 10-4 to 10-6.
See also Adjust Pricing;. See also Volume 2.
- Material vendors. *See Volume 2.*
- M-CACES. *See Volume 2.*
- MCACES GOLD. *See GOLD.*
- MCACES Menu, 1-12. *See also Volume 2.*
- Member Override, 11-12
- Memory Requirements, 2-1 to 2-2
- Menu bar, 3-2
- Menu (F9) function key, 3-17
- Menus

- accessing with mouse, 3-26
- database, 3-21 to 3-22
- function, 3-18 to 3-20
- using, 3-20, 3-23

- Merge From, 18-7 to 18-8
- Merge Two Databases. *See Volume 2.*
- Message line, 3-3
- Military projects, 5-6 to 5-7. *See also Volume 2.*
- MILTMP project template. *See Volume 2.*
- Models Database. *See Volume 2.*
- Models Module. *See Volume 2.*
- Modes, 3-9 to 3-11
- Modifiers
 - adding, 6-51, 10-16
 - definition, 6-49
 - deleting, 6-52, 10-17
 - editing, 6-49 to 6-52, 10-15
 - Project Database, 6-49 to 6-52
 - Unit Price Database, 10-14 to 10-17
- Modifying data. *See Editing.*
- Mouse
 - configuring, 2-8
 - installing, 2-4
 - starting GOLD with, 2-8
 - using, 3-26
- Move, 18-6. *See also Volume 2.*
- Multiple-choice fields, 15-5
- Multi-user capability, 2-3. *See also Networks.*

N

- Name Database Columns, 22-3
- Name Project Columns Screen, 5-8 to 5-19
- Networks
 - GOLD compatibility with, 2-3
 - installation on, 2-9 to 2-14
 - system administrator, 2-10, 25-1
- New databases, creating. *See Adding, databases.*
- New estimate, starting, 5-2 to 5-5
- New features of GOLD 5.20, 1-5 to 1-12

Next Element, 17-6

Notes

- adding Notes, 15-3

- Contingency Notes, 7-23 to 7-25

- editing Notes, 15-2 to 15-3

- Note window, 3-14 to 3-15 , 15-3

- Project Notes, 22-7 to 22-8, 23-13

- printing, 6-15, 15-4, 23-8, 23-12

- size of, 15-3

- viewing Notes, 3-14, 15-2

Notes (F7) function key, 3-17

Numbers

- how displayed, 6-2

- notation of, 6-2

- rounding, on reports, 23-12

- storage of, 6-2

O

Other Report Formatting Screen, 23-10

Overhead, contractor's

- computing, 7-10 to 7-11

- cost column, 5-15

- items, 7-11

- separate for subcontractors, 7-14

Overrides

- contractor, 6-7, 7-18

- cost, 6-8

Overtime, adjusting for

- in Labor Rates Database, 12-5

- in project, 6-37 to 6-38

Owner Cost Level, 5-22

Owner Costs. *See also Volume 2.*

- about, 7-19

- column types, 5-16

- Contingency column, 5-16

- cost methods, 7-21

- default Level, 5-22

- Escalation column, 5-16 , 7-22

- summary report, 23-33 to 23-34

- working with, 7-19 to 7-25

Owner furnished property, 5-16

P

Pack a Database, 24-13

Page Down key, 3-25 , 23-3

Page Up key, 3-25, 23-3

Parameter Worksheets. *See Volume 2.*

Parent contractor, 7-3

Parent title, 18-3

Payroll Tax and Insurance, 12-6

PC Networks. *See Networks.*

Permission settings, 2-10, 25-3 to 25-6

PKZip utility, 2-3, 24-6

Plus sign (+) with keys, 3-23

Prepare Menu

- accessing, 22-1

- Name Database Columns, 22-3

- purpose, 22-1

- Reprice Labor and Equipment, 22-5

- Reprice Material, 22-6

- Select 2nd View Columns. *See Volume 2.*

- Set 2nd View Exceptions. *See Volume 2.*

- Set Breakdown Structure, 22-4

Previous Element, 17-5

Prices, updating. *See Adjust Pricing; Adjusting material prices; Repricing.*

Prime contractors, 7-3 to 7-4

Print Database Listing Screen, 23-22

Print Device, 23-21

Printer Setup

- defining, 25-9 to 25-11

- selecting, 23-21

Printer Setup Table Screen, 25-10

Print Single Element, 20-3

Printing. *See also Reports.*

- database listings, 23-22 to 23-23

- elements, 20-3

- estimate, 23-15 to 23-21

- Notes, 6-15, 15-4, 23-8, 23-12

- stopping, 23-4

- supporting databases, 23-22 to 23-23

- to disk, 23-21

Productivity, 9-10, 11-8. *See also Crews.*

Profit

- computing, 7-10, 7-12 to 7-14

- cost column, 5-15

- defining, 7-9 to 7-10
- separate for subcontractors, 7-12 to 7-14
- Profit Weighted Guidelines, 7-13 to 7-14, 25-7 to 25-8
- report, 23-52
- Project. *See Project Database.*
- Project columns. *See Cost columns.*
- Project Database
 - accessing, 6-2
 - adding cost items, 6-9 to 6-22
 - adding a new database, 5-2 to 5-5, 8-3
 - adding titles, 6-3 to 6-8
 - creating, 5-2 to 5-5, 8-3
 - crews in, 6-25 to 6-36
 - database edit screen, 5-2 to 5-5
 - definition, 3-3
 - deleting data, 6-24
 - editing, 6-23
 - Estimate Type, 5-6, 5-8 to 5-11
 - notes, 22-7 to 22-8, 23-13
 - overview of use, 4-1 to 4-2
 - Report Title Page Screen, 23-13 to 23-15
 - samples, supplied with GOLD, 3-6, 5-6 to 5-7
 - selecting a, 8-1 to 8-2
 - starting a new, 5-2 to 5-5, 8-3
 - structure of, 5-6 to 5-7
 - templates, 8-3
- Project Direct Costs. *See Direct Costs.*
- PROJECT Directory, 2-4
- Project ID, 5-20, 6-6
- Project Indirect Costs. *See Indirect Costs.*
- Project Information Record, 7-4, 7-5
- Project management software, interface to. *See Volume 2.*
- Project Notes, 22-7 to 22-8, 23-13
- Project Owner Costs. *See Owner Costs.*
- Project Reports. *See Reports.*
- Project Sequence field, 6-14
- Project Settings Report, 23-16, 23-51
- Project structure
 - breakdown structure, 5-7

- defining, 5-7 to 5-8, 5-20 to 5-22
- Estimate Type, 5-8 to 5-11
- project columns, 5-12 to 5-19
- Project summary reports, 23-17, 23-33 to 23-37
- Project templates, 8-3
- Promote Title. *See Volume 2.*
- Prompts, 3-13 to 3-14

Q

- Quotes, for materials. *See Volume 2.*
- Quit GOLD, 2-8, 26-4

R

- RACES, 26-3
- Recalculate, 19-2 to 19-3
- Reports
 - 2nd View. *See Volume 2.*
 - about, 23-2
 - backup, 23-18, 23-48 to 23-50
 - by building systems, 23-44 to 23-46
 - contractor summary, 23-27, 23-38 to 23-41
 - cost markups on, 23-30
 - by CSI Divisions, 23-42 to 23-43
 - Detail, 23-6, 23-17, 23-30 to 23-32
 - division summary, 23-17, 23-42 to 23-43
 - formatting
 - loading formats, 23-28 to 23-29
 - saving formats, 23-28 to 23-29
 - of Detail, 23-6 to 23-9
 - of summary, 23-10 to 23-12
 - overview, 23-2 to 23-3
 - Page Down key for, 23-3
 - printing, 23-19 to 23-21
 - saving to disk, 23-21
 - selecting to print, 23-15 to 23-18
 - settings, 23-16, 23-51
 - shipping, 23-47
 - summary, 23-10, 23-17 to 23-18, 23-33 to 23-47

- system summary, 23-18, 23-44 to 23-46
- task list for, 23-3
- title page, 23-13 to 23-15
- viewing on the screen, 23-26 to 23-27
- Report Selection Screen, 23-15
- Reports Menu
 - accessing, 23-5
 - Edit Detail Report Formatting, 23-6 to 23-9
 - Edit Other Formatting, 23-10 to 23-12
 - Edit Report Title Page, 23-13 to 23-15
 - List Material Backup / Vendor. *See Volume 2.*
 - Print Selected Reports, 23-19 to 23-22
 - purpose, 23-5
 - Save / Load Report Settings, 23-28 to 23-29
 - Select Reports to Print, 23-15 to 23-18
 - View Reports With Viewer, 23-26 to 23-27
- Report Title Page Screen, 23-13 to 23-15
- Report Writer, 19-2, 23-2
- Reprice L & E, 19-5
- Reprice Labor and Equipment, 22-5
- Reprice Material, 19-4, 22-6
- Repricing. *See also, Adjust Pricing; Estimate Type.*
 - about, 5-8
 - equipment costs, 19-5, 22-5
 - labor costs, 19-5, 22-5
 - material costs, 19-4, 22-6-
- Reset Database Index, 24-12
- Resize Browse, 15-6
- Run Communications, 26-2
- Run RACES, 26-3
- Run Reports Window, 23-19 to 23-21

S

- Sales Tax, 23-14 to 23-15, 23-30
- Save /Load Report Settings, 23-28 to 23-29
- Save To Compressed, 24-6 to 24-9

- Saving your work. *See Exit Screen; Exiting GOLD, Save to Compressed.*
- Scheduling Software Interface. *See Volume 2.*
- Screen
 - resizing, 15-6
 - types of, 3-9
- Screen Restore, 15-6
- Scroll bars, 3-13 to 3-14
- Searching a database. *See Lookup; Find Keyword.*
- Second View (2nd View). *See Volume 2.*
- Security. *See Permission settings.*
- Select 2nd View Columns. *See Volume 2.*
- Select (F8) function key, 3-17, 15-5
- Select From List, 15-5
- Selecting a database, 8-1 to 8-2, 24-3
- Sequence Code, 6-14
- Services Menu
 - accessing, 24-1
 - choosing multiple databases, 24-2
 - Copy a Database, 24-5
 - Erase a Database, 24-14
 - Load From Compressed, 24-10 to 24-11
 - Pack a Database, 24-13
 - purpose, 24-1
 - Reset Database Index, 24-12
 - Save To Compressed, 24-6 to 24-9
 - Select a Database, 24-3
- Set 2nd View Exceptions. *See Volume 2.*
- Set Breakdown Structure, 5-20 to 5-22
- Set Breakdown Structure Screen, 5-20
- Settings reports, 23-16, 23-51
- Shift Key, 3-23
- Shipping cost column, 5-14
- Shipping costs
 - cost column, 5-14
 - defining shipping weight, 6-39 to 6-41, 10-12 to 10-13
 - example of use, 6-44
 - setting rates, 6-41 to 6-44

- report, 23-47
- task list, 6-39
- Shipping Summary Report, 23-47
- Show Memory, 21-4
- SIOH, 5-16
- Source database, 18-3, 18-7
- Source ID, 6-14, 10-9
- Special Report Formatting
 - Options, 23-12b
- Starting GOLD, 2-7, 2-8
- Startup directory, 2-4, 2-11
- Status line, 3-3
- Status messages, 3-3
- Subcontractor cost column, 5-14
- Subcontractors
 - defining, 7-5 to 7-16
 - definition, 7-3
 - example of, 7-3
 - separate overhead and profit on, 7-12 to 7-16
 - tiering, 7-4
 - UPB field, 10-11
- Subdirectory. *See Directories, DOS.*
- Summary reports
 - contractor, 23-27, 23-38 to 23-41
 - descriptions, 23-33 to 23-47
 - division, 23-17, 23-42 to 23-43
 - examples of, 23-33 to 23-47
 - formatting, 23-10 to 23-12
 - Project Direct, 23-17, 23-36 to 23-37
 - Project Indirect, 23-17, 23-34 to 23-35
 - Project Owner, 23-17, 23-33 to 23-34
 - system, 23-18, 23-44 to 23-46
- Supervision costs, 5-16
- Supporting databases
 - about, 1-1, 3-3 to 3-5
 - adding
 - databases, 9-7 to 9-12
 - detail items, 9-4 to 9-5
 - titles, 9-2 to 9-3
 - deleting from, 9-7
 - editing, 9-6
 - Lookup to, 16-6 to 16-7
 - printing, 9-6, 20-3, 23-22 to 23-25

- repricing, 5-6, 19-4 to 19-5, 22-5 to 22-6
 - using multiple, 9-12
- SYSDATA Directory, 2-4
- System Administrator, 2-10, 25-1
- System code, 6-15, 14-4
- System summary reports, 23-18, 23-44 to 23-46
- System Toolkit. *See Volume 2.*
- Systems estimating method, 14-3

T

- Tab key, 3-24
- TABLES Directory, 2-4
- Target database, 18-7. *See also Volume 2.*
- Templates, project, 8-3
- Tiering of contracts. *See Contractors; Indirect Costs.*
- Title
 - definition, 3-6
 - levels, 3-6 to 3-8, 5-20 to 5-22
- Title element. *See Element.*
- Title entry screen
 - Assemblies Database, 14-5 to 14-7
 - Crews Database, 11-6 to 11-9
 - Equipment Rates Database, 13-3 to 13-4
 - Labor Rates Database, 12-3
 - Project Database
 - primary, 6-3 to 6-8
 - secondary, 6-4, 6-30
 - Unit Price Database, 10-3 to 10-7
- Title levels
 - defining in project, 5-20 to 5-22
 - in Detail Report, 23-6 to 23-9
 - in summary reports, 23-17 to 23-18
- Title list screen, 3-7, 3-11
- Titles (F3) function key, 3-16, 17-2
- Tools Menu. *See also Volume 2.*
 - advanced options, 20-2
 - purpose, 20-1
 - Print Single Element, 20-3
- Top of Database, 17-5

Total costs, notation of, 6-2
Tradesmen. *See Labor items, Labor Rates Database.*
Trailing separators, 5-22
Translating from COMPOSER PLUS. *See Volume 2.*
Translate from MCACES PLUS, *See Volume 2.*
Travel or Subsistence, 12-6
Tutorial, A-1

U

UPB. *See Unit Price Database.*
UPB ID, 6-14, 10-3, 10-9, 19-8, 22-6, 23-8, 23-42
UPB Cost Override, 6-16
UPB Override, 10-10
Unit costs
 display of, 6-2
 in project, 6-8, 6-16
 notation of, 6-2
Unit Price Book (UPB), 3-4
Unit Price Database
 adding to, 9-2 to 9-5, 10-3, 10-8 to 10-13
 adjusting material prices, 10-4 to 10-7. *See also Volume 2.*
 browse mode screen, 10-2, 10-13
 database edit screen, 9-7 to 9-11
 definition, 3-4
 deleting from, 9-7
 detail items, 10-8 to 10-13
 editing, 9-6, 10-3 to 10-13
 Lookup to, 16-6
 modifiers, 10-14 to 10-17
 purpose, 10-1
 structure of, 10-2
 titles, 10-3
 supplied with GOLD, 10-1
 utilities for. *See Volume 2.*
 using multiple, 9-12
Units of Measure, 9-10, 23-17, B-1 to B-4
Unit Volume, 6-40, 10-13

Unit Weight, 6-40, 10-12
Unlink Element. *See Volume 2.*
Update UPB From Vendor Backup. *See Volume 2.*
Update UPB With Material Indicators Utility. *See Volume 2.*
Updating prices. *See Adjust Pricing; Adjusting material prices; Repricing.*
User Settings Screen, 25-3 to 25-6
Utilities Menu. *See Volume 2.*

V

Vendors (Material and Vendor Backup). *See Volume 2.*
View Marks, 18-2
View Reports Using Viewer, 23-26

W

Work Breakdown Structure, defining, 5-20
Workmen's Compensation, 12-6
Workmen's Insurance, 12-6